ENGINEERING BY TRENCO
A MiTek Affiliate

RE: 25040098-01
918 Serenity-Roof-B326 B CP GRH

Trenco
818 Soundside Rd
Edenton, NC 27932

Site Information:

Customer: David Weekley Homes Project Name: 25040098-01
Lot/Block: 918 Model:
Address: 1116 Serenity Walk Parkway Subdivision: Serenity
City: Fuquay-Varina State: NC

General Truss Engineering Criteria & Design Loads (Individual Truss Design Drawings Show Special Loading Conditions):

Design Code: IRC2021/TPI2014 Design Program: MiTek 20/20 8.7
Wind Code: ASCE 7-16 Wind Speed: 130 mph
Roof Load: 40.0 psf Floor Load: N/A psf

This package includes 38 individual, dated Truss Design Drawings and 0 Additional Drawings.

No.	Seal#	Truss Name	Date	No.	Seal#	Truss Name	Date
1	I73103576	A01	4/30/2025	21	I73103596	PBA	4/30/2025
2	I73103577	A03	4/30/2025	22	I73103597	PBA1	4/30/2025
3	I73103578	A04	4/30/2025	23	I73103598	PBA2	4/30/2025
4	I73103579	A05	4/30/2025	24	I73103599	VLB1	4/30/2025
5	I73103580	A06	4/30/2025	25	I73103600	VLB2	4/30/2025
6	I73103581	A07	4/30/2025	26	I73103601	VLB3	4/30/2025
7	I73103582	A08	4/30/2025	27	I73103602	VLB4	4/30/2025
8	I73103583	A09	4/30/2025	28	I73103603	VLB5	4/30/2025
9	I73103584	B01	4/30/2025	29	I73103604	VLB6	4/30/2025
10	I73103585	B02	4/30/2025	30	I73103605	VLB7	4/30/2025
11	I73103586	B03	4/30/2025	31	I73103606	VLB8	4/30/2025
12	I73103587	C01	4/30/2025	32	I73103607	VLD1	4/30/2025
13	I73103588	C02	4/30/2025	33	I73103608	VLD2	4/30/2025
14	I73103589	D01	4/30/2025	34	I73103609	VLD3	4/30/2025
15	I73103590	D02	4/30/2025	35	I73103610	VLD4	4/30/2025
16	I73103591	E01	4/30/2025	36	I73103611	VLD5	4/30/2025
17	I73103592	G01	4/30/2025	37	I73103612	VLD6	4/30/2025
18	I73103593	H01	4/30/2025	38	I73103613	VLD7	4/30/2025
19	I73103594	H02	4/30/2025				
20	I73103595	J01	4/30/2025				

The truss drawing(s) referenced above have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Carter Components (Sanford, NC)).

Truss Design Engineer's Name: Gilbert, Eric

My license renewal date for the state of North Carolina is December 31, 2025.

North Carolina COA: C-0844

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to TRENCO. Any project specific information included is for TRENCO customers file reference purpose only, and was not taken into account in the preparation of these designs. TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

April 30, 2025

Gilbert, Eric

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A01	Piggyback Base Supported Gable	1	1	I73103576 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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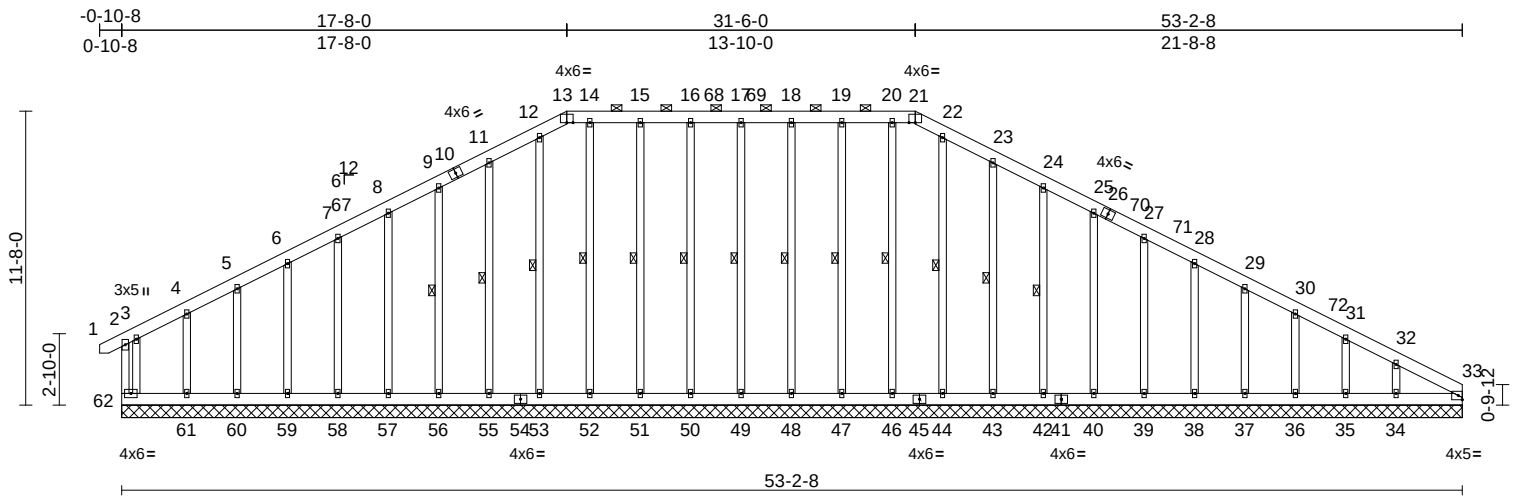

Scale = 1:91.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.13	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.01	33	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 546 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3 *Except* 49-17,48-18,47-19,46-20,44-22,50-16,51-15, 52-14,53-12:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (10-0-0 max.): 13-21.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 17-49, 18-48, 19-47, 20-46, 22-44, 23-43, 24-42, 16-50, 15-51, 14-52, 12-53, 11-55, 9-56

REACTIONS (size) 33=53-2-8, 34=53-2-8, 35=53-2-8, 36=53-2-8, 37=53-2-8, 38=53-2-8, 39=53-2-8, 40=53-2-8, 42=53-2-8, 43=53-2-8, 44=53-2-8, 46=53-2-8, 47=53-2-8, 48=53-2-8, 49=53-2-8, 50=53-2-8, 51=53-2-8, 52=53-2-8, 53=53-2-8, 55=53-2-8, 56=53-2-8, 57=53-2-8, 58=53-2-8, 59=53-2-8, 60=53-2-8, 61=53-2-8, 62=53-2-8
Max Horiz 62=-186 (LC 12)
Max Uplift 34=-66 (LC 14), 35=-171 (LC 15), 36=-15 (LC 14), 37=-50 (LC 15), 38=-42 (LC 15), 39=-44 (LC 15), 40=-43 (LC 15), 42=-46 (LC 15), 43=-52 (LC 15), 47=-29 (LC 11), 48=-28 (LC 11), 49=-25 (LC 10), 50=-28 (LC 11), 51=-29 (LC 10), 55=-52 (LC 14), 56=-46 (LC 14), 57=-43 (LC 14), 58=-44 (LC 14), 59=-46 (LC 14), 60=-22 (LC 14), 61=-138 (LC 14), 62=-88 (LC 15)
Max Grav 34=413 (LC 25), 35=84 (LC 13), 36=196 (LC 41), 37=153 (LC 59), 38=174 (LC 45), 39=221 (LC 45), 40=230 (LC 45), 42=229 (LC 45), 43=230 (LC 45), 44=217 (LC 45), 46=199 (LC 40), 47=220 (LC 40), 48=217 (LC 40), 49=216 (LC 40), 50=217 (LC 40), 51=220 (LC 40), 52=199 (LC 40), 53=217 (LC 43), 55=234 (LC 43), 56=233 (LC 43), 57=233 (LC 43), 58=233 (LC 43), 59=199 (LC 43), 60=151 (LC 58), 61=255 (LC 51), 62=134 (LC 58)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 2-62=-243/191, 1-2=0/23, 2-3=-100/92, 3-4=-75/120, 4-5=-49/115, 5-6=-59/156, 6-7=-75/201, 7-8=-91/246, 8-9=-107/291, 9-11=-125/338, 11-12=-145/387, 12-13=-147/384, 13-14=-140/380, 14-15=-140/380, 15-16=-140/380, 16-17=-140/380, 17-18=-140/380, 18-19=-140/380, 19-20=-140/380, 20-21=-140/380, 21-22=-147/384, 22-23=-145/387, 23-24=-125/338, 24-25=-107/291, 25-27=-91/246, 27-28=-75/201, 28-29=-60/160, 29-30=-64/136, 30-31=-72/111, 31-32=-125/100, 32-33=-134/115
BOT CHORD 61-62=-80/149, 60-61=-80/149, 59-60=-80/149, 58-59=-80/149, 57-58=-80/149, 56-57=-80/149, 55-56=-80/149, 53-55=-80/149, 52-53=-80/149, 51-52=-80/149, 50-51=-80/149, 49-50=-80/149, 48-49=-80/149, 47-48=-80/149, 46-47=-80/149, 44-46=-80/149, 43-44=-80/149, 42-43=-80/149, 40-42=-80/149, 39-40=-80/149, 38-39=-80/149, 37-38=-80/149, 36-37=-80/149, 35-36=-80/149, 34-35=-80/149, 33-34=-80/149

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WEBS 17-49=-176/57, 18-48=-177/62, 19-47=-180/61, 20-46=-159/6, 22-44=-177/2, 23-43=-190/87, 24-42=-189/81, 25-40=-190/77, 27-39=-181/77, 28-38=-132/77, 29-37=-125/77, 30-36=-138/78, 31-35=-67/120, 32-34=-241/136, 16-50=-177/62, 15-51=-180/61, 14-52=-159/1, 12-53=-177/0, 11-55=-194/87, 9-56=-193/81, 8-57=-193/77, 7-58=-194/77, 6-59=-157/77, 5-60=-116/91, 4-61=-185/158, 3-62=-226/261

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-8-6 to 4-7-0, Exterior(2N) 4-7-0 to 12-4-2, Corner(3R) 12-4-2 to 22-11-14, Exterior(2N) 22-11-14 to 26-2-2, Corner(3R) 26-2-2 to 36-7-0, Exterior(2N) 36-7-0 to 47-10-10, Corner(3E) 47-10-10 to 53-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) Provide adequate drainage to prevent water ponding.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) N/A
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A03	Piggyback Base	8	1	I73103577 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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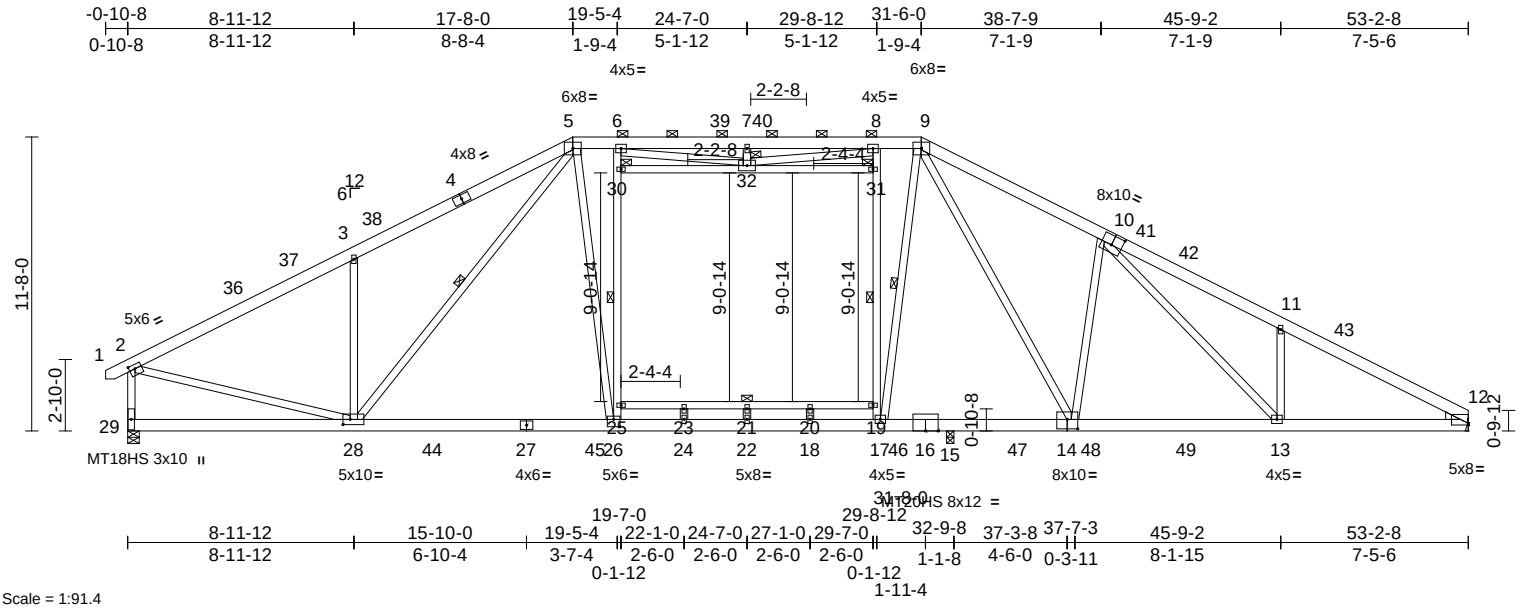


Scale = 1:91.4

Plate Offsets (X, Y): [2:0-2-12,0-2-0], [10:0-5-0,0-4-8], [12:Edge,0-0-13], [14:0-5-0,0-4-8], [26:0-3-0,0-3-8], [28:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.93	Vert(LL)	-0.36	22-24	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.62	22-24	>631	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.99	Horz(CT)	0.10	12	n/a	n/a	MT20HS	187/143
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 470 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x6 SP 2400F 2.0E *Except* 25-19:2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 28-2,6-26,8-17,17-9,14-9,26-5,28-5:2x4 SP No.2
WEDGE Right: 2x4 SP No.3

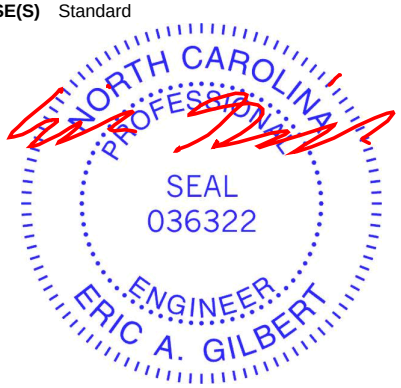
BRACING
TOP CHORD Structural wood sheathing directly applied or 3-0-6 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-0 max.): 5-9.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except: 6-0-0 oc bracing: 23-25,21-23,20-21,19-20.
WEBS 1 Row at midpt 26-30, 17-31, 9-17, 5-28
JOINTS 1 Brace at Jt(s): 30, 31, 32

REACTIONS (size) 12= Mechanical, 15=0-3-8, 29=0-5-8
Max Horiz 29=-186 (LC 12)
Max Uplift 12=-58 (LC 14), 15=-210 (LC 15), 29=-206 (LC 14)
Max Grav 12=2290 (LC 47), 15=887 (LC 39), 29=2608 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-3=-3591/268, 3-5=-3716/468, 5-6=-3156/293, 6-7=-3623/491, 7-8=-3623/491, 8-9=-3135/291, 9-11=-4560/361, 11-12=-4604/251, 2-29=-2647/250
BOT CHORD 28-29=-120/230, 26-28=-87/2900, 24-26=-74/3065, 22-24=-74/3065, 18-22=-74/3065, 17-18=-74/3065, 15-17=-47/2883, 13-15=-101/3496, 12-13=-140/3993, 23-25=-74/35, 21-23=-74/35, 20-21=-74/35, 19-20=-74/35
WEBS 2-28=-127/3075, 25-26=-521/205, 25-30=-483/245, 6-30=-469/250, 17-19=-927/203, 19-31=-842/223, 8-31=-823/219, 9-17=-129/1185, 10-14=-910/320, 9-14=-168/879, 10-13=-221/767, 11-13=-332/232, 5-26=-36/1179, 3-28=-842/342, 5-28=-253/512, 21-22=-70/0, 30-32=-12/43, 31-32=-139/25, 7-32=-255/87, 6-32=-289/705, 8-32=-276/815, 23-24=-191/0, 18-20=-169/0

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-6 to 4-7-8, Interior (1) 4-7-8 to 10-1-11, Exterior(2R) 10-1-11 to 39-1-13, Interior (1) 39-1-13 to 47-10-10, Exterior(2E) 47-10-10 to 53-2-8 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.
8) All plates are 2x4 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Refer to girder(s) for truss to truss connections.
12) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 12.
13) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 29 and 15. This connection is for uplift only and does not consider lateral forces.
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard



April 30,2025

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818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A04	Piggyback Base	3	1	I73103578 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:14 Page: 1

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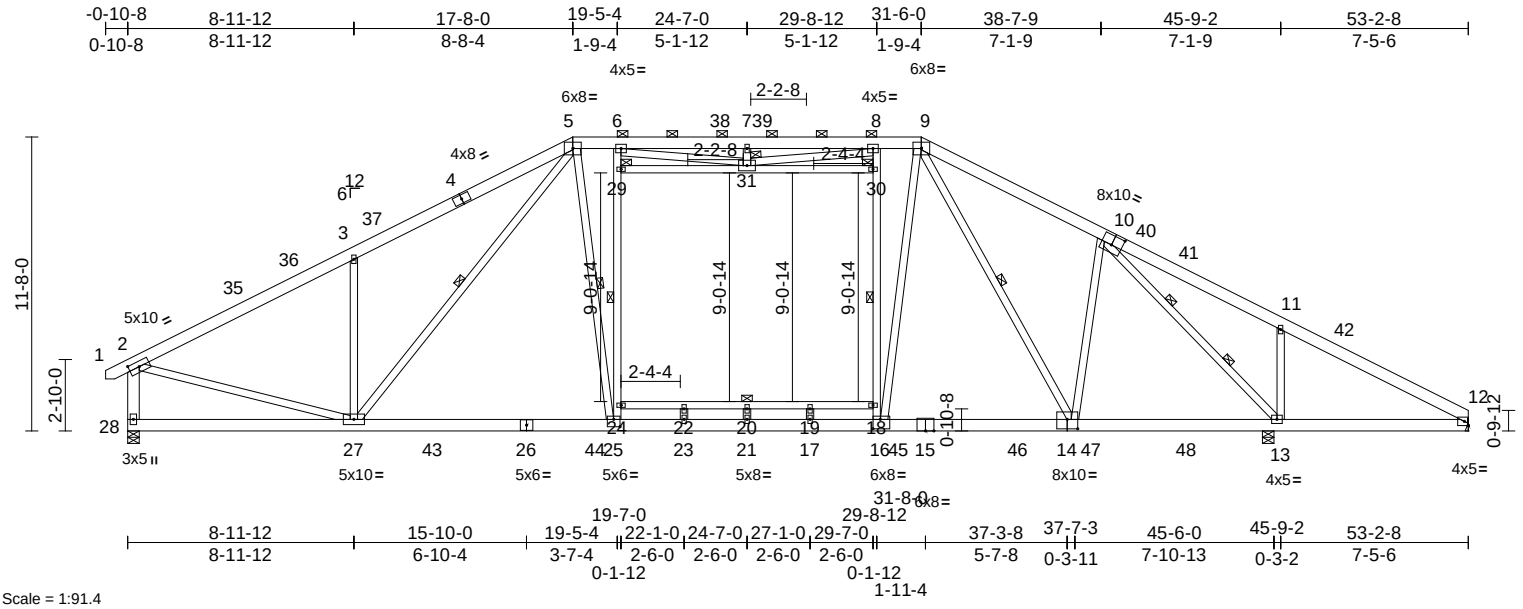


Scale = 1:91.4

Plate Offsets (X, Y): [2:0-4-14,0-2-8], [10:0-5-0,0-4-8], [14:0-5-0,0-4-8], [16:0-3-8,0-4-8], [25:0-3-0,0-3-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.70	Vert(LL)	-0.36	25-27	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.89	Vert(CT)	-0.54	22-24	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.92	Horz(CT)	0.09	12	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 471 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2

BOT CHORD 2x6 SP 2400F 2.0E *Except* 24-18:2x4 SP No.2, 14-12,15-14:2x6 SP No.2

WEBS 2x4 SP No.3 *Except* 28-2:2x6 SP No.2, 27-2,6-25,8-16,27-5,25-5,16-9,14-9,13-10:2x4 SP No.2

BRACING

TOP CHORD Structural wood sheathing directly applied or 3-1-0 oc purlins, except end verticals, and 2-0-0 oc purlins (3-6-7 max.): 5-9.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

WEBS 1 Row at midpt 25-29, 16-30, 5-27, 5-25, 9-14

WEBS 2 Rows at 1/3 pts 10-13

JOINTS 1 Brace at Jt(s): 29, 30, 31

REACTIONS (size) 12= Mechanical, 13=0-5-8, 28=0-5-8

Max Horiz 28=-187 (LC 12)

Max Uplift 12=-199 (LC 14), 13=-414 (LC 15), 28=-187 (LC 14)

Max Grav 12=876 (LC 37), 13=2647 (LC 39), 28=2524 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/25, 2-3=-3470/240, 3-5=-3585/434, 5-6=-3020/294, 6-7=-3544/494, 7-8=-3544/494, 8-9=-2997/293, 9-11=-3120/512, 11-12=-1458/442, 2-28=-2579/244

BOT CHORD 27-28=-136/289, 25-27=-52/2779, 23-25=-26/2939, 21-23=-26/2939, 17-21=-26/2939, 16-17=-26/2939, 13-16=-118/2665, 12-13=-334/1258, 22-24=-71/37, 20-22=-71/37, 19-20=-71/37, 18-19=-71/37

WEBS 2-27=-91/2883, 24-25=-515/251, 24-29=-478/316, 6-29=-465/319, 16-18=-898/232, 18-30=-835/250, 8-30=-816/246, 3-27=-817/328, 5-27=-263/544, 5-25=-91/1106, 9-16=-85/1683, 9-14=-451/6, 10-14=0/661, 10-13=-2539/304, 11-13=-456/259, 20-21=-61/0, 29-31=-48/92, 30-31=-173/44, 7-31=-262/86, 6-31=-302/731, 8-31=-282/841, 22-23=-187/0, 17-19=-200/0

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-6 to 4-7-8, Interior (1) 4-7-8 to 10-1-11, Exterior(2R) 10-1-11 to 39-1-13, Interior (1) 39-1-13 to 47-10-10, Exterior(2E) 47-10-10 to 53-2-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Refer to girder(s) for truss to truss connections.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 199 lb uplift at joint 12.
12) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 28 and 13. This connection is for uplift only and does not consider lateral forces.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

LOAD CASE(S) Standard

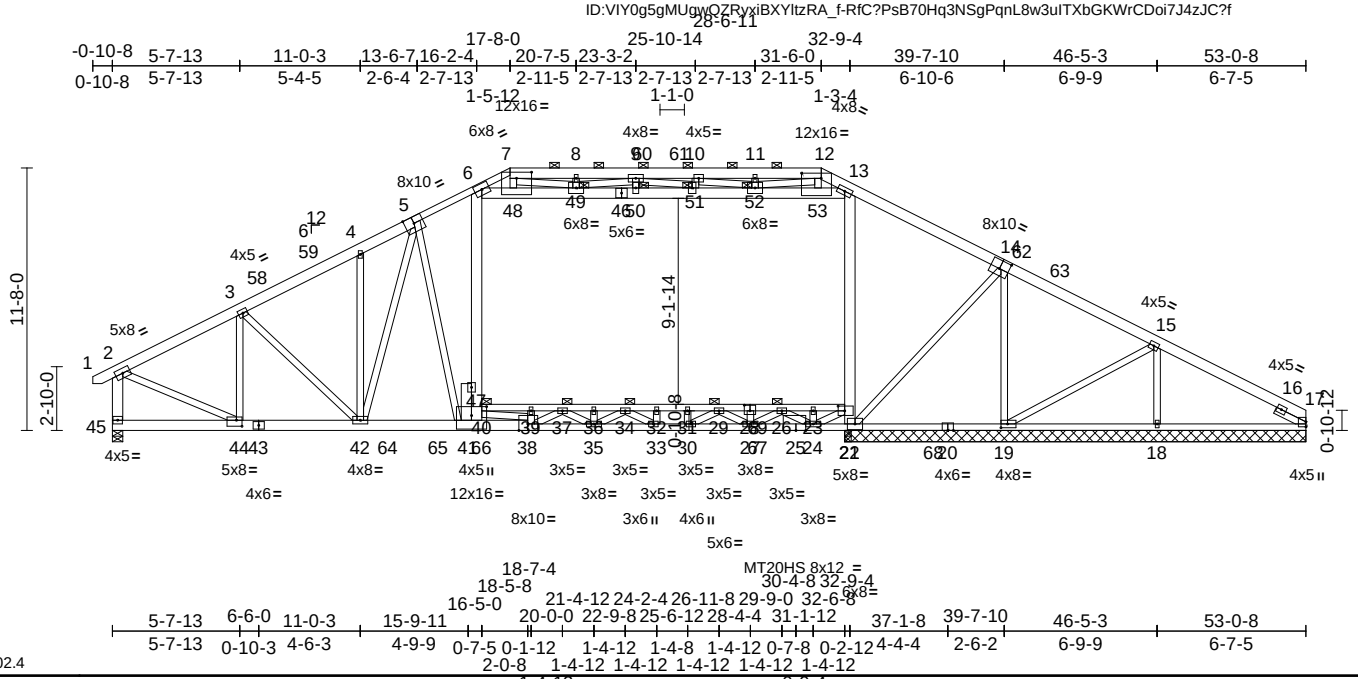
April 30,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A05	Attic Girder	1	4	I73103579 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:14 Page: 1

ID:VIY0g5gMUgwQZRyxiBXYltzRA_f-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:102.4

Plate Offsets (X, Y): [7:0-8-0,0-3-4], [12:0-10-8,0-2-12], [14:0-5-0,0-4-8], [19:0-3-8,0-2-0], [22:0-3-8,0-2-8], [25:0-5-4,Edge], [28:0-3-0,0-3-0], [38:0-4-12,Edge], [41:0-8-0,0-4-12], [44:0-3-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.42	38-41	>926	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.97	Vert(CT)	-0.63	38-41	>617	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.97	Horz(CT)	0.17	17	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.21	22-40	>931	360		
BCDL	10.0										Weight: 2005 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 5-7:2x4 SP No.1

BOT CHORD 2x4 SP 2400F 2.0E *Except* 43-38,43-45:2x6 SP No.2, 28-22,20-17:2x4 SP No.2

WEBS 2x4 SP No.3 *Except* 13-21:2x6 SP 2400F 2.0E, 6-46,45-2,41-47,41-6,46-13:2x6 SP No.2, 44-2:2x4 SP No.2

SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-12.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

JOINTS 1 Brace at Jt(s): 49, 50, 51, 52, 40, 26, 37, 29, 34

REACTIONS (size) 17=20-6-0, 18=20-6-0, 19=20-6-0, 21=20-6-0, 45=0-5-8

Max Horiz 45=-188 (LC 10)

Max Uplift 17=-141 (LC 13), 18=-383 (LC 12), 19=-265 (LC 12), 21=-11735 (LC 46), 45=-708 (LC 12)

Max Grav 17=2267 (LC 46), 18=7963 (LC 23), 19=5365 (LC 46), 21=1104 (LC 12), 45=12082 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-13894/811, 3-4=-17855/1068, 4-6=-19196/1164, 6-7=-5749/483, 7-8=-3024/527, 8-9=-3021/526, 9-10=-3792/720, 10-11=-1853/1232, 11-12=-1853/1232, 12-13=-5041/447, 13-15=-18603/1151, 15-17=-4060/262, 2-45=-11891/728

BOT CHORD 44-45=-126/446, 42-44=-761/12424, 41-42=-877/16595, 35-41=-660/17142, 33-35=0/18682, 30-33=0/19483, 27-30=0/18806, 24-27=-281/16626, 21-24=-805/13168, 19-21=-553/10974, 18-19=-179/3511, 17-18=-179/3511, 39-40=-515/594, 37-39=-518/546, 36-37=-2880/0, 34-36=-2880/0, 32-34=-3769/0, 31-32=-3769/0, 29-31=-3769/0, 26-29=-2830/0, 23-26=-322/1917, 22-23=-322/1917

WEBS 3-44=-5422/380, 3-42=-243/5049, 4-42=-776/166, 5-41=-150/1931, 21-22=-715/6617, 13-22=-547/7714, 6-48=-11763/751, 48-49=-11346/727, 49-50=-11312/680, 50-51=-11353/682, 51-52=-16183/978, 52-53=-12452/790, 13-53=-13084/827, 2-44=-701/13155, 40-41=-699/7786, 6-40=-547/8776, 7-48=-156/2528, 8-49=-546/66, 9-50=-137/2538, 10-51=-241/36, 11-52=-238/66, 12-53=-207/3427, 22-24=0/2405, 38-40=0/2734, 23-24=-541/0, 38-39=-594/0, 24-26=-2137/0, 37-38=-1092/0, 26-27=0/2655, 35-37=0/1905, 27-28=-765/12, 35-36=-942/22, 27-29=-229/226, 34-35=-202/159, 29-30=0/879, 33-34=-17/945, 30-31=-431/0, 32-33=-391/12, 7-49=-4489/251, 9-49=-4763/367, 9-51=-4992/308, 10-52=-2393/279, 12-52=-5783/334, 14-19=-9336/551, 15-19=-442/8385, 14-21=-441/8353, 5-42=-2558/146, 15-18=-7758/466

NOTES

1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-7-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-9-0 oc, Except member 41-47 2x6 - 3 rows staggered at 0-4-0 oc, member 6-41 2x6 - 2 rows staggered at 0-4-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.

April 30,2025

Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 6-48, 48-49, 49-50, 50-51, 51-52, 52-53, 13-53; Wall dead load (5.0psf) on member(s).13-22, 6-40
14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 39-40, 37-39, 36-37, 34-36, 32-34, 31-32, 29-31, 28-29, 26-28, 23-26, 22-23
15) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 11735 lb uplift at joint 21.
16) N/A

17) N/A

18) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
19) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
20) LGT4 Hurricane ties must have four studs in line below the truss.
21) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 608 lb down and 52 lb up at 28-8-4, and 9100 lb down and 774 lb up at 16-1-4 on bottom chord. The design/ selection of such connection device(s) is the responsibility of others.
22) Attic room checked for L/360 deflection.

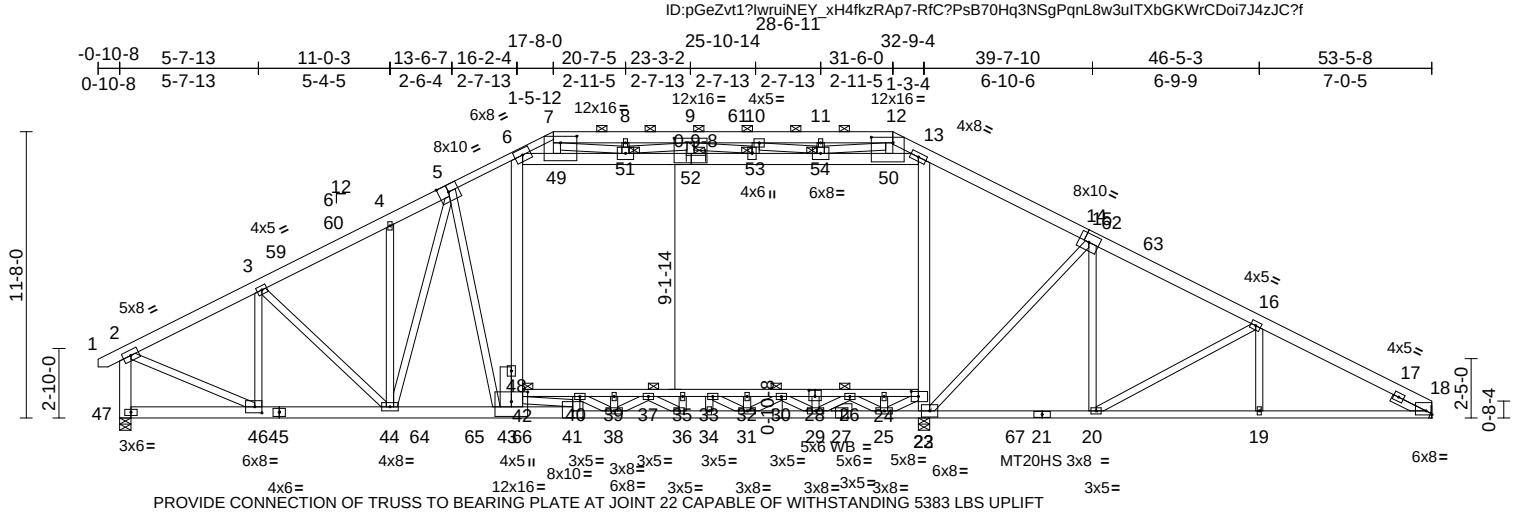
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-60, 2-7=-60, 7-12=-60, 12-17=-60, 45-54=-20, 22-40=-30, 6-48=-10, 48-49=-10, 46-49=-10, 46-50=-10, 50-51=-10, 51-52=-10, 52-53=-10, 13-53=-10
   Drag: 13-22=-10, 40-47=-10, 6-47=-10
   Concentrated Loads (lb)
   Vert: 41=-4881 (F), 67=-326 (F)

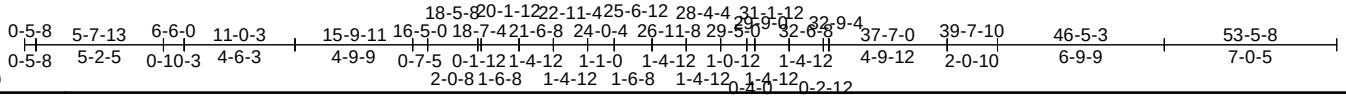
Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A06	Attic Girder	1	4	I73103580 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:15 Page: 1

ID:pGeZvt1?lwruiNEY_xH4fkzRAp7-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



PROVIDE CONNECTION OF TRUSS TO BEARING PLATE AT JOINT 22 CAPABLE OF WITHSTANDING 5383 LBS UPLIFT REACTION DUE TO GRAVITY LOADING APPLIED TO THE TRUSS. IT IS THE RESPONSIBILITY OF THE PROJECT ARCHITECT/ENGINEER TO DESIGN THE CONNECTION OF THE TRUSS TO THE BEARING PLATE, PROVIDE AND DESIGN CONNECTION SYSTEM FOR A CONTINUOUS LOAD PATH FROM THE TRUSS TO THE FOUNDATION, AND DESIGN FOOTING/FOUNDATION TO RESIST SUCH UPLIFT. FAILURE TO DO SO WILL VOID THIS CONSTRUCTION.



Scale = 1:93.9

Plate Offsets (X, Y): [7:0-8-0,0-3-4], [9:0-8-0,0-2-4], [12:0-10-8,0-2-12], [18:Edge,0-2-0], [23:0-3-8,0-2-8], [28:0-3-0,0-3-0], [43:0-8-0,0-4-12], [46:0-3-8,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	-0.49	41-43	>800	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.73	Vert(CT)	-0.74	41-43	>530	180	MT20HS	187/143
TCDL	10.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.21	18	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.24	23-42	>809	360		
BCDL	10.0										Weight: 2020 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2 *Except* 5-7:2x4 SP 2400F 2.0E

BOT CHORD 2x4 SP 2400F 2.0E *Except* 47-45:2x6 SP No.2, 42-28,28-23:2x4 SP No.2, 45-41:2x6 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 6-43,6-52,47-2,43-48,52-13:2x6 SP No.2, 13-22:2x6 SP 2400F 2.0E, 46-2:2x4 SP No.2

OTHERS 2x4 SP No.3

SLIDER Right 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD Structural wood sheathing directly applied or 4-4-5 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 7-12.

BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

JOINTS 1 Brace at Jt(s): 42, 51, 52, 53, 54, 26, 30, 37

REACTIONS (size) 18= Mechanical, 22=0-5-8, 47=0-5-8

Max Horiz 47=-190 (LC 10)

Max Uplift 18=-421 (LC 12), 22=-5383 (LC 45), 47=-683 (LC 12)

Max Grav 18=8904 (LC 46), 22=793 (LC 12), 47=11748 (LC 46)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=0/24, 2-3=-13498/782, 3-4=-17368/1033, 4-6=-18572/1120, 6-7=-6007/480, 7-8=-3098/528, 8-9=-3095/527, 9-10=-3730/713, 10-11=-1716/1437, 11-12=-1716/1437, 12-13=-4562/424, 13-15=-17758/1088, 15-16=-17909/1006, 16-18=-17623/896, 2-47=-11551/702

BOT CHORD 46-47=-124/440, 44-46=-731/12075, 43-44=-832/16083, 38-43=-686/16693, 36-38=0/17735, 34-36=0/18049, 31-34=0/18049, 29-31=0/16737, 25-29=-154/14351, 22-25=-775/12144, 20-22=-780/16080, 19-20=-737/15458, 18-19=-737/15458, 40-42=-790/31, 39-40=-2303/0, 37-39=-2303/0, 35-37=-3084/0, 33-35=-3084/0, 32-33=-2967/0, 30-32=-2967/0, 26-30=-1186/728, 24-26=-366/3070, 23-24=-366/3070

WEBS 3-46=-5311/373, 3-44=-238/4930, 4-44=-697/163, 5-43=-124/1464, 42-43=-614/7199, 6-42=-531/8734, 22-23=-712/6597, 13-23=-513/7232, 6-49=-10641/684, 49-51=-10263/662, 51-53=-11084/660, 53-54=-15528/928, 50-54=-12362/771, 13-50=-12999/808, 2-46=-673/12779, 7-49=-147/2360, 12-50=-204/3452, 7-51=-4776/262, 8-51=-469/63, 9-51=-4230/346, 9-52=-120/2270, 9-53=-4656/281, 10-53=-108/93, 10-54=-2535/279, 11-54=-269/67, 12-54=-5373/307, 23-25=0/1635, 24-25=-569/0, 25-26=-1727/0, 26-29=0/2288, 38-40=0/1572, 28-29=-733/20, 38-39=-499/9, 29-30=-799/0, 37-38=-363/251, 30-31=0/1377, 36-37=0/559, 31-32=-542/0, 35-36=-323/0, 31-33=-172/5, 33-34=-22/125, 41-42=0/2662, 40-41=-885/0, 15-22=-629/212, 15-20=-254/167, 16-20=-135/835, 16-19=-34/151, 5-44=-2270/112

NOTES

1) 4-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc, 2x4 - 1 row at 0-9-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, 2x6 - 2 rows staggered at 0-4-0 oc, Except member 43-48 2x6 - 3 rows staggered at 0-4-0 oc, member 13-22 2x6 - 2 rows staggered at 0-9-0 oc.
Attach BC w/ 1/2" diam. bolts (ASTM A-307) in the center of the member w/washers at 4-0-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.

April 30,2025

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ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60

5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
8) Provide adequate drainage to prevent water ponding.
9) All plates are MT20 plates unless otherwise indicated.
10) All plates are 2x4 MT20 unless otherwise indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
13) Ceiling dead load (5.0 psf) on member(s). 6-49, 49-51, 51-52, 52-53, 53-54, 50-54, 13-50; Wall dead load (5.0psf) on member(s).6-42, 13-23
14) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 40-42, 39-40, 37-39, 35-37, 33-35, 32-33, 30-32, 28-30, 26-28, 24-26, 23-24
15) Refer to girder(s) for truss to truss connections.
16) Bearing at joint(s) 47 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
17) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 5383 lb uplift at joint 22 and 421 lb uplift at joint 18.
18) LGT4-SDS3 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 47. This connection is for uplift only and does not consider lateral forces.
19) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
20) This truss has large uplift reaction(s) from gravity load case(s). Proper connection is required to secure truss against upward movement at the bearings. Building designer must provide for uplift reactions indicated.
21) LGT4 Hurricane ties must have four studs in line below the truss.
22) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 9100 lb down and 774 lb up at 16-1-4 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.
23) Attic room checked for L/360 deflection.

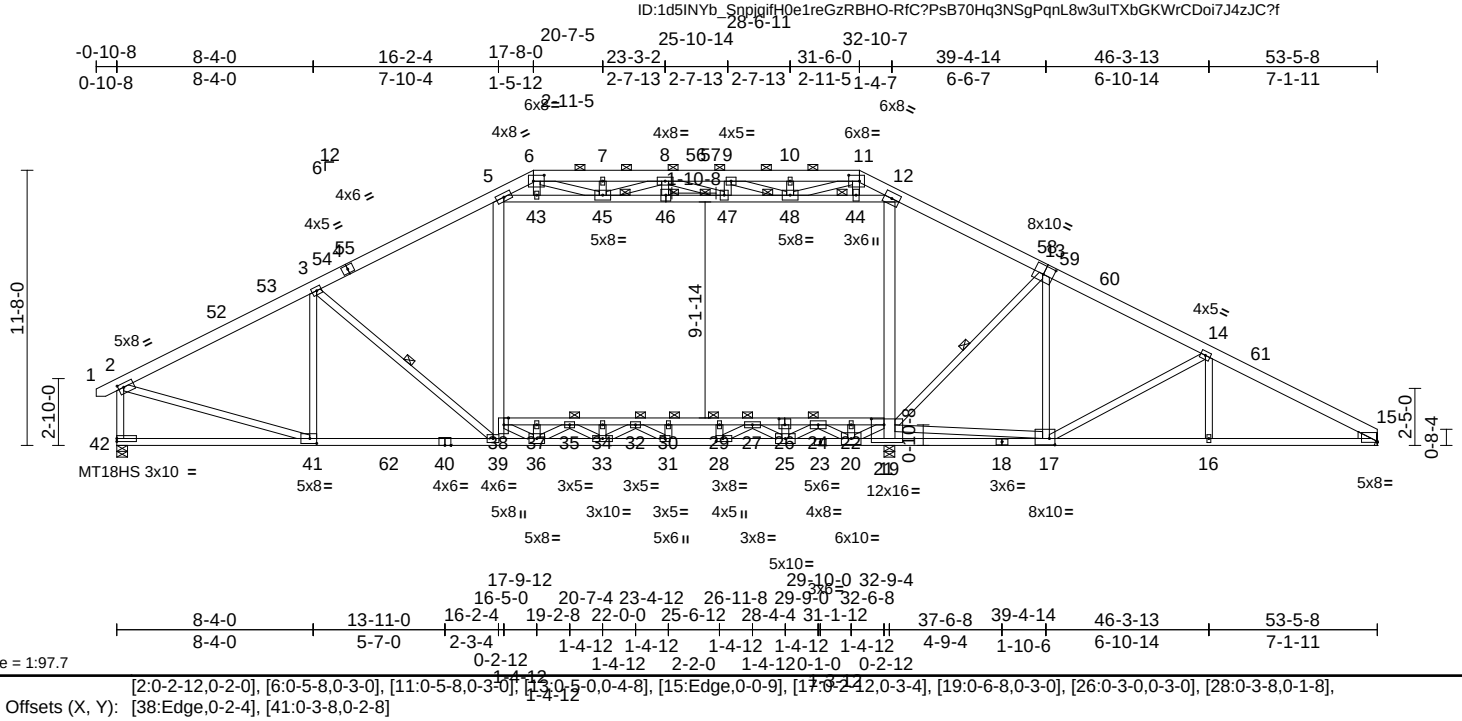
LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-2=-60, 2-7=-60, 7-12=-60, 12-18=-60, 47-55=-20, 23-42=-30, 6-49=-10, 49-51=-10, 51-52=-10, 52-53=-10, 53-54=-10, 50-54=-10, 13-50=-10
   Drag: 42-48=-10, 6-48=-10, 13-23=-10
   Concentrated Loads (lb)
   Vert: 43=-4881 (F)

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A07	Attic	1	1	I73103581 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:16 Page: 1

ID:1d5INYb_SnpiqifH0e1reGzRBHO-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:97.7

Plate Offsets (X, Y): [2:0-2-12,0-2-0], [6:0-5-8,0-3-0], [11:0-5-8,0-3-0], [13:0-5-0,0-4-8], [15:Edge,0-0-9], [17:0-2-12,0-3-4], [19:0-6-8,0-3-0], [26:0-3-0,0-3-0], [28:0-3-8,0-1-8], [38:Edge,0-2-4], [41:0-3-8,0-2-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.97	Vert(LL)	-0.47	31-33	>832	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.77	31-33	>509	180	MT18HS	244/190
TCDL	10.0	Rep Stress Incr	YES	WB	0.94	Horz(CT)	0.15	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.32	21-38	>604	360		
BCDL	10.0										Weight: 454 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2

BOT CHORD 2x4 SP No.1 *Except* 38-26,23-18:2x4 SP No.2, 18-15,40-23:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 5-39,12-19:2x6 SP No.2, 5-46,41-2,20-21,36-38,20-24,36-35,25-24,33-35,25-27,33-32,28-27,31-32,46-12:2x4 SP No.2, 21-17:2x4 SP No.1

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-9 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-8 max.): 6-11.

BOT CHORD Rigid ceiling directly applied or 2-2-0 oc bracing.

WEBS 1 Row at midpt 3-39, 13-21, 12-48

JOINTS 1 Brace at Jt(s): 45, 46, 47, 48, 24, 35, 27, 32

REACTIONS (size) 15= Mechanical, 19=0-5-8, 42=0-5-8

Max Horiz 42=-190 (LC 12)

Max Uplift 19=-53 (LC 15), 42=-29 (LC 14)

Max Grav 15=2298 (LC 48), 19=1791 (LC 40), 42=3001 (LC 38)

FORCES (lb) - Maximum Compression/Maximum Tension

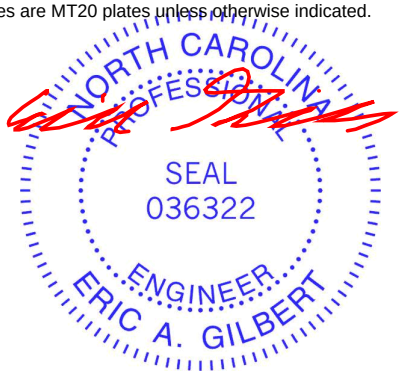
TOP CHORD 1-2=0/22, 2-3=-3960/13, 3-5=-4083/4, 5-6=-2145/100, 6-7=-2982/360, 7-8=-2982/360, 8-9=-3607/504, 9-10=-2740/396, 10-11=-2740/396, 11-12=-1776/151, 12-14=-4107/52, 14-15=-4661/41, 2-42=-2998/72

BOT CHORD 41-42=-107/219, 39-41=-18/3431, 36-39=0/3348, 33-36=0/5184, 31-33=0/6301, 28-31=0/6096, 25-28=0/4799, 20-25=0/1815, 19-20=-2308/0, 17-19=-2112/0, 16-17=0/4042, 15-16=-63/4042, 37-38=-1137/0, 35-37=-1137/0, 34-35=-3123/0, 32-34=-3123/0, 30-32=-3174/0, 29-30=-3174/0, 27-29=-3174/0, 24-27=-686/960, 22-24=0/3308, 21-22=0/3308

WEBS 3-41=-681/78, 3-39=-149/358, 38-39=-27/336, 5-38=0/1190, 19-21=-1401/162, 12-21=-46/1140, 13-21=-575/314, 13-17=-270/90, 14-17=-554/207, 14-16=0/243, 5-43=-2080/21, 43-45=-2006/21, 45-47=-1596/1329, 47-48=-1798/1222, 44-48=-2469/25, 12-44=-2566/25, 2-41=0/3475, 6-43=0/354, 11-44=0/450, 6-45=-342/1277, 7-45=-138/122, 8-45=-874/122, 8-46=0/62, 8-47=-287/59, 9-47=-6/131, 9-48=-923/115, 10-48=-170/78, 11-48=-314/1439, 20-21=0/2701, 36-38=0/1559, 20-22=-352/0, 36-37=-230/0, 20-24=-2166/0, 35-36=-1293/0, 24-25=0/2106, 33-35=0/1051, 25-26=-320/0, 33-34=-185/0, 25-27=-1406/0, 32-33=-302/182, 27-28=0/1531, 31-32=-365/27, 28-29=-534/0, 30-31=-6/96, 17-21=0/5333

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-8-2 to 4-8-1, Interior (1) 4-8-1 to 10-1-4, Exterior(2R) 10-1-4 to 39-0-12, Interior (1) 39-0-12 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) Provide adequate drainage to prevent water ponding.
7) All plates are MT20 plates unless otherwise indicated.



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Continued on page 2

ENGINEERING BY TRENCO A MiTek Affiliate
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Edenton, NC 27932

8) All plates are 2x4 MT20 unless otherwise indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Ceiling dead load (5.0 psf) on member(s). 5-43, 43-45, 45-46, 46-47, 47-48, 44-48, 12-44; Wall dead load (5.0psf) on member(s).5-38, 12-21
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 37-38, 35-37, 34-35, 32-34, 30-32, 29-30, 27-29, 26-27, 24-26, 22-24, 21-22
13) Refer to girder(s) for truss to truss connections.
14) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 42 and 19. This connection is for uplift only and does not consider lateral forces.
15) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
16) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A08	Attic	6	1	I73103582 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:17 Page: 1

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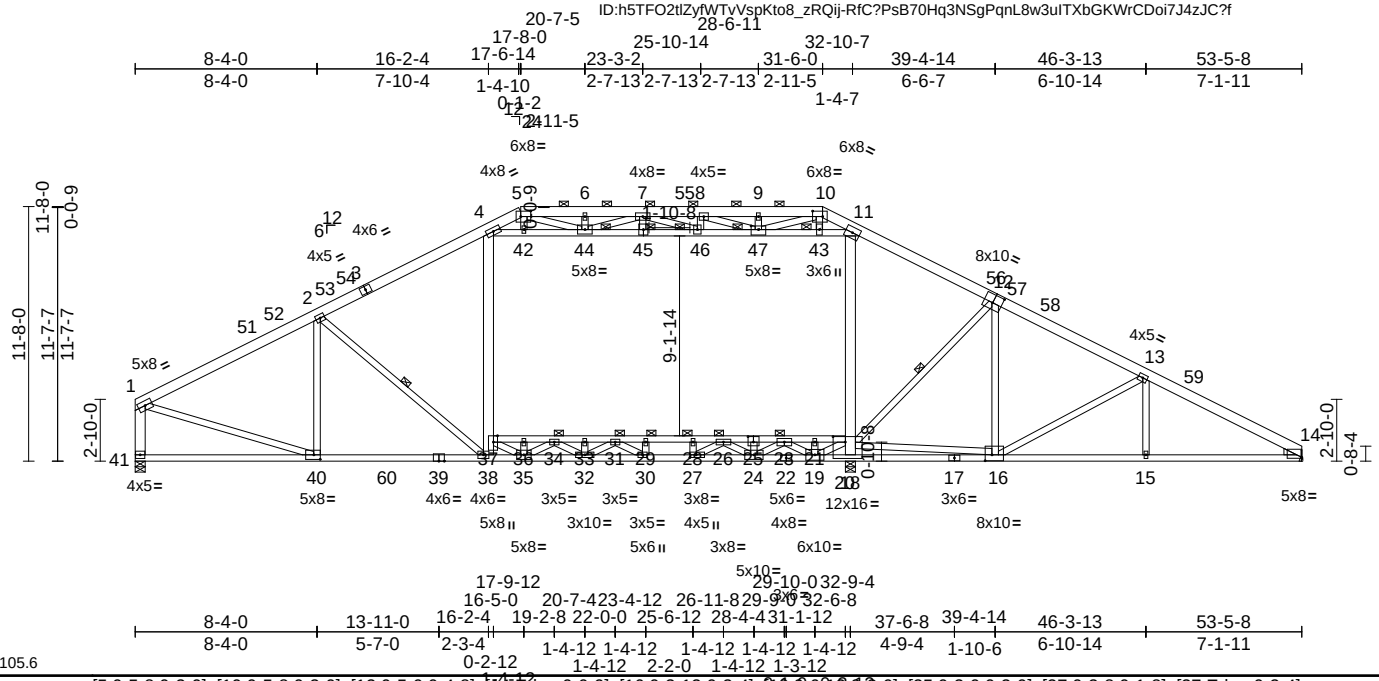

Scale = 1:105.6

Plate Offsets (X, Y): [5:0-5-8,0-3-0], [10:0-5-8,0-3-0], [12:0-5-0,0-4-8], [14:Edge,0-0-9], [16:0-3-12,0-3-4], [18:0-5-12,0-3-0], [25:0-3-0,0-3-0], [27:0-3-8,0-1-8], [37:Edge,0-2-4], [40:0-3-8,0-2-8], [47:0-4-0,0-2-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.66	Vert(LL)	-0.47	30-32	>836	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.95	Vert(CT)	-0.76	30-32	>512	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.93	Horz(CT)	0.15	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH		Attic	-0.32	20-37	>605	360		
BCDL	10.0										Weight: 453 lb	FT = 20%

LUMBER

TOP CHORD 2x6 SP No.2

BOT CHORD 2x4 SP No.1 *Except* 37-25,22-17:2x4 SP No.2, 17-14,39-22:2x4 SP 2400F 2.0E

WEBS 2x4 SP No.3 *Except* 4-38,11-18,41-1:2x6 SP No.2, 4-45,40-1,19-20,35-37,19-23,35-34,24-23,32-34,24-26,32-31,27-26,30-31,45-11:2x4 SP No.2, 20-16:2x4 SP No.1

WEDGE Right: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 2-9-12 oc purlins, except end verticals, and 2-0-0 oc purlins (3-9-9 max.): 5-10.

BOT CHORD Rigid ceiling directly applied or 2-6-0 oc bracing.

WEBS 1 Row at midpt 2-38, 12-20, 11-47

JOINTS 1 Brace at Jt(s): 44, 45, 46, 47, 23, 34, 26, 31

REACTIONS (size) 14= Mechanical, 18=0-5-8, 41=0-5-8

Max Horiz 41=-222 (LC 15)

Max Grav 14=2293 (LC 47), 18=1786 (LC 39), 41=2957 (LC 37)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 1-2=-3909/0, 2-4=-4057/0, 4-5=-2341/100, 5-6=-3002/359, 6-7=-2993/361, 7-8=-3600/503, 8-9=-2737/395, 9-10=-2737/395, 10-11=-1774/149, 11-13=-4089/46, 13-14=-4643/46, 1-41=-2957/19

BOT CHORD 40-41=-104/246, 38-40=0/3385, 35-38=0/3320, 32-35=0/5160, 30-32=0/6293, 27-30=0/6093, 24-27=0/4802, 19-24=0/1826, 18-19=-2291/0, 16-18=-2098/0, 15-16=0/4026, 14-15=-64/4026, 36-37=-1129/0, 34-36=-1129/0, 33-34=-3123/0, 31-33=-3123/0, 29-31=-3183/0, 28-29=-3183/0, 26-28=-3183/0, 23-26=-704/942, 21-23=0/3270, 20-21=0/3270

WEBS 2-40=-705/62, 2-38=-131/400, 37-38=-45/325, 4-37=0/1181, 18-20=-1397/105, 11-20=-46/1135, 12-20=-570/324, 12-16=-271/93, 13-16=-555/210, 13-15=0/243, 4-42=-1878/67, 42-44=-1804/66, 44-46=-1587/1326, 46-47=-1783/1225, 43-47=-2448/0, 11-43=-2544/0, 1-40=0/3450, 5-42=0/324, 10-43=0/447, 5-44=-341/1085, 6-44=-46/157, 7-44=-845/121, 7-45=0/60, 7-46=-279/3, 8-46=0/129, 8-47=-919/115, 9-47=-170/78, 10-47=-314/1436, 19-20=0/2696, 35-37=0/1556, 19-21=-351/0, 35-36=-230/0, 19-23=-2163/0, 34-35=-1298/0, 23-24=0/2102, 32-34=0/1056, 24-25=-319/0, 32-33=-185/0, 24-26=-1402/0, 31-32=-307/178, 26-27=0/1523, 30-31=-356/12, 27-28=-531/0, 29-30=-2/94, 16-20=0/5300

NOTES

1) Unbalanced roof live loads have been considered for this design.

2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-12 to 5-6-14, Interior (1) 5-6-14 to 10-1-4, Exterior(2R) 10-1-4 to 39-0-12, Interior (1) 39-0-12 to 48-1-6, Exterior(2E) 48-1-6 to 53-5-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60

3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10

4) Unbalanced snow loads have been considered for this design.

5) Provide adequate drainage to prevent water ponding.

6) All plates are 2x4 MT20 unless otherwise indicated.

7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.

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8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Ceiling dead load (5.0 psf) on member(s). 4-42, 42-44, 44-45, 45-46, 46-47, 43-47, 11-43; Wall dead load (5.0psf) on member(s).4-37, 11-20
10) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 36-37, 34-36, 33-34, 31-33, 29-31, 28-29, 26-28, 25-26, 23-25, 21-23, 20-21
11) Refer to girder(s) for truss to truss connections.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
13) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	A09	Attic Supported Gable	1	1	I73103583 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 E May 9 2024 Print: 8.730 E May 9 2024 MiTek Industries, Inc. Wed Apr 30 16:53:40 Page: 1

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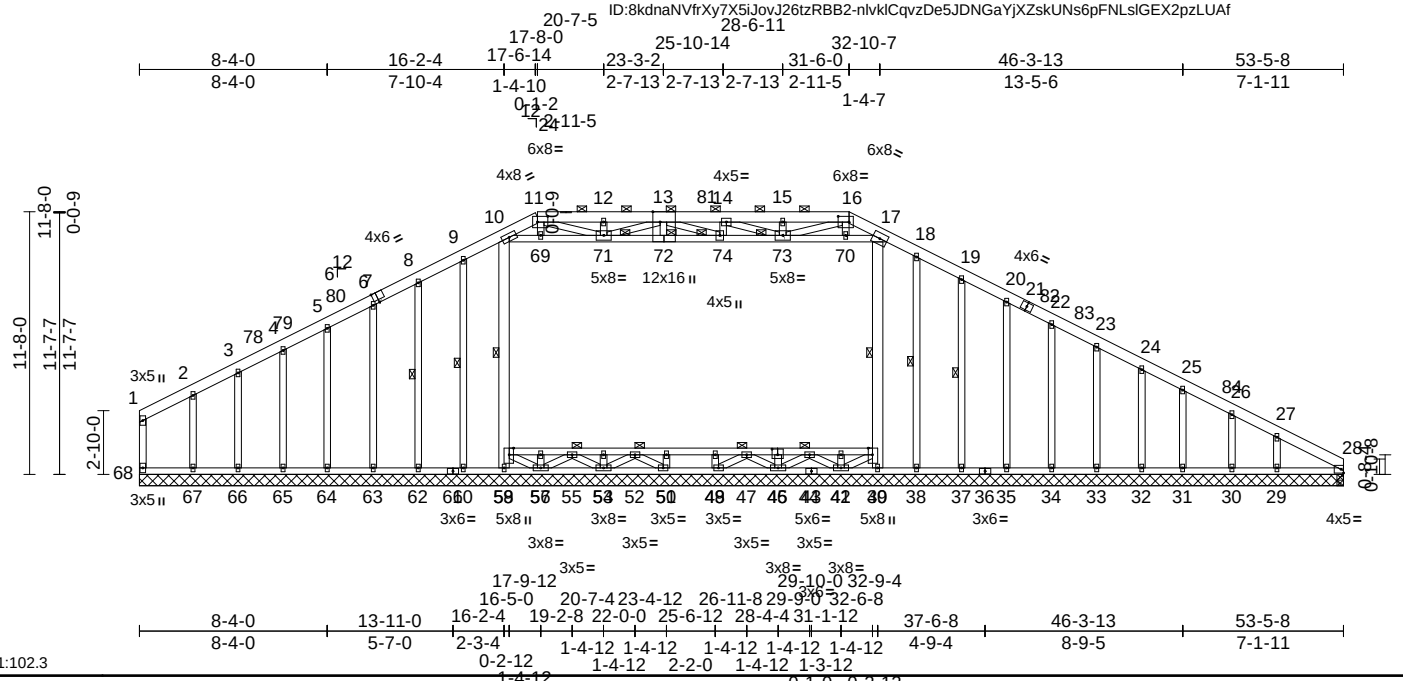

Scale = 1:102.3

Plate Offsets (X, Y): [7:0-2-6,Edge], [11:0-5-8,0-3-0], [16:0-5-12,0-3-0], [40:Edge,0-2-4], [46:0-3-0,0-3-0], [58:Edge,0-2-4], [72:Edge,0-3-14]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	-0.01	10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.19	Vert(CT)	-0.01	10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.64	Horz(CT)	0.02	28	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 503 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x4 SP No.2 *Except* 58-46:2x4 SP No.3
WEBS 2x4 SP No.3 *Except* 10-59,17-39:2x6 SP No.2, 10-72,72-17:2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (4-1-8 max.): 11-16.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing, Except:
6-0-0 oc bracing: 48-51.
WEBS 1 Row at midpt 10-58, 17-40, 18-38, 19-37, 9-60, 8-62
JOINTS 1 Brace at Jt(s): 44, 55, 47, 52, 71, 72, 73, 74

REACTIONS (lb/size) 28=122/53-5-8, 29=231/53-5-8, 30=148/53-5-8, 31=164/53-5-8, 32=149/53-5-8, 33=161/53-5-8, 34=160/53-5-8, 35=169/53-5-8, 37=127/53-5-8, 38=-21/53-5-8, 39=915/53-5-8, 42=156/53-5-8, 45=138/53-5-8, 48=121/53-5-8, 51=121/53-5-8, 53=135/53-5-8, 56=148/53-5-8, 59=937/53-5-8, 60=-19/53-5-8, 62=142/53-5-8, 63=170/53-5-8, 64=160/53-5-8, 65=157/53-5-8, 66=163/53-5-8, 67=152/53-5-8, 68=115/53-5-8, 75=122/53-5-8
Max Horiz 68=-221 (LC 15)
Max Uplift 28=-48 (LC 14), 29=-101 (LC 15), 30=-28 (LC 15), 31=-47 (LC 15), 32=-41 (LC 15), 33=-44 (LC 15), 34=-44 (LC 15), 35=-45 (LC 15), 37=-49 (LC 15), 38=-131 (LC 40), 39=-44 (LC 10), 59=-13 (LC 10), 60=-134 (LC 40), 62=-50 (LC 14), 63=-45 (LC 14), 64=-43 (LC 14), 65=-44 (LC 14), 66=-37 (LC 14), 67=-76 (LC 14), 68=-20 (LC 15), 75=-48 (LC 14)
Max Grav 28=161 (LC 28), 29=234 (LC 45), 30=148 (LC 22), 31=165 (LC 41), 32=149 (LC 22), 33=172 (LC 45), 34=219 (LC 45), 35=235 (LC 45), 37=208 (LC 45), 38=113 (LC 53), 39=1108 (LC 40), 42=333 (LC 20), 45=369 (LC 20), 48=319 (LC 20), 51=319 (LC 20), 53=368 (LC 20), 56=329 (LC 20), 59=1127 (LC 40), 60=121 (LC 51), 62=222 (LC 43), 63=242 (LC 43), 64=231 (LC 43), 65=181 (LC 43), 66=165 (LC 21), 67=164 (LC 43), 68=122 (LC 21), 75=161 (LC 28)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-68=-88/57, 1-2=-63/38, 2-3=-65/113, 3-4=-77/174, 4-5=-88/222, 5-6=-101/267, 6-8=-120/314, 8-9=-135/359, 9-10=-114/375, 10-11=-941/351, 11-12=-2157/595, 12-13=-2150/596, 13-14=-2800/763, 14-15=-2130/592, 15-16=-2130/592, 16-17=-894/327, 17-18=-122/376, 18-19=-143/366, 19-20=-137/322, 20-22=-121/275, 22-23=-109/230, 23-24=-102/203, 24-25=-122/180, 25-26=-147/158, 26-27=-170/133, 27-28=-220/125

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BOT CHORD 67-68=-94/211, 66-67=-94/211, 65-66=-94/211, 64-65=-94/211, 63-64=-94/211, 62-63=-94/211, 60-62=-94/211, 59-60=-94/211, 56-59=-102/212, 53-56=-51/143, 51-53=-32/130, 48-51=-57/107, 45-48=-32/129, 42-45=-48/140, 39-42=-82/199, 38-39=-86/211, 37-38=-86/211, 35-37=-86/211, 34-35=-86/211, 33-34=-86/211, 32-33=-86/211, 31-32=-86/211, 30-31=-86/211, 29-30=-86/211, 28-29=-86/211, 57-58=-11/89, 55-57=-11/89, 54-55=-28/110, 52-54=-28/110, 50-52=-36/104, 49-50=-36/104, 47-49=-36/104, 44-47=-30/113, 41-44=-11/84, 40-41=-11/84

WEBS 5-64=-191/76, 58-59=-1098/31, 10-58=-1104/111, 39-40=-1081/60, 17-40=-1091/149, 25-31=-129/79, 10-69=-55/713, 69-71=-52/703, 71-74=-439/2717, 73-74=-445/2770, 70-73=-40/628, 17-70=-43/635, 18-38=-74/170, 19-37=-168/77, 20-35=-195/80, 22-34=-179/77, 23-33=-131/78, 24-32=-118/72, 26-30=-117/95, 27-29=-186/180, 9-60=-81/174, 8-62=-182/80, 6-63=-201/81, 4-65=-142/83, 3-66=-126/114, 2-67=-134/143, 40-42=-103/10, 56-58=-88/14, 41-42=-202/0, 56-57=-202/0, 42-44=-112/19, 55-56=-118/21, 44-45=-124/0, 53-55=-120/0, 45-46=-180/0, 53-54=-180/0, 45-47=-118/0, 52-53=-121/0, 47-48=-100/0, 51-52=-101/0, 48-49=-218/0, 50-51=-218/0, 11-69=-32/18, 16-70=-27/19, 12-71=-180/52, 13-72=-1/25, 15-73=-236/67, 14-74=-23/52, 11-71=-290/1476, 13-71=-643/185, 13-74=-61/155, 14-73=-713/182, 16-73=-327/1551

NOTES

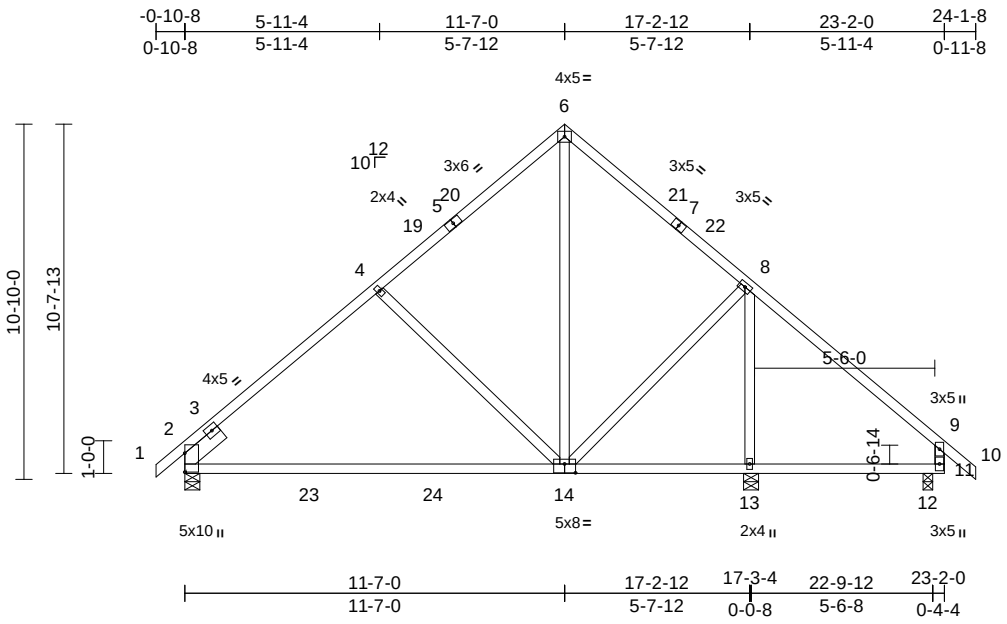
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) 0-1-12 to 5-5-14, Exterior(2N) 5-5-14 to 12-3-14, Corner(3R) 12-3-14 to 23-3-2, Exterior(2N) 23-3-2 to 25-10-14, Corner(3R) 25-10-14 to 36-10-2, Exterior(2N) 36-10-2 to 48-1-6, Corner(3E) 48-1-6 to 53-5-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Provide adequate drainage to prevent water ponding.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable studs spaced at 2-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
11) Ceiling dead load (5.0 psf) on member(s). 10-69, 69-71, 71-72, 72-74, 73-74, 70-73, 17-70; Wall dead load (5.0psf) on member(s).10-58, 17-40
12) Bottom chord live load (40.0 psf) and additional bottom chord dead load (5.0 psf) applied only to room. 57-58, 55-57, 54-55, 52-54, 50-52, 49-50, 47-49, 46-47, 44-46, 41-44, 40-41
13) N/A
14) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.
15) Attic room checked for L/360 deflection.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	B01	Common	1	1	I73103584 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:17 ID:Nseaq6A9EjNfxKX1O6yXnly7LSU-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:70.3

Plate Offsets (X, Y): [14:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.47	14-17	>439	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.86	Vert(CT)	-0.76	14-17	>271	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.51	Horz(CT)	0.07	2	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 133 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.1
WEBS	2x4 SP No.3
SLIDER	Left 2x6 SP No.2 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 5-6-9 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-5-8, 12=0-3-8, 13=0-5-8
Max Horiz 2=264 (LC 13)
Max Uplift 2=-75 (LC 14), 12=-101 (LC 15), 13=-25 (LC 14)
Max Grav 2=895 (LC 5), 12=496 (LC 26), 13=894 (LC 22)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/34, 2-4=-1149/151, 4-6=-727/185, 6-8=-721/180, 8-9=-357/114, 9-10=0/42, 9-11=-394/143
BOT CHORD	2-13=-251/724, 12-13=0/198, 11-12=0/198
WEBS	6-14=-104/474, 8-14=-48/407, 8-13=-824/78, 4-14=-398/238

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 8-7-0, Exterior(2R) 8-7-0 to 14-7-0, Interior (1) 14-7-0 to 21-1-8, Exterior(2E) 21-1-8 to 24-1-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 2 and 13. This connection is for uplift only and does not consider lateral forces.
9) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 12. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

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Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	B02	Common Girder	1	2	I73103585 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:18 Page: 1

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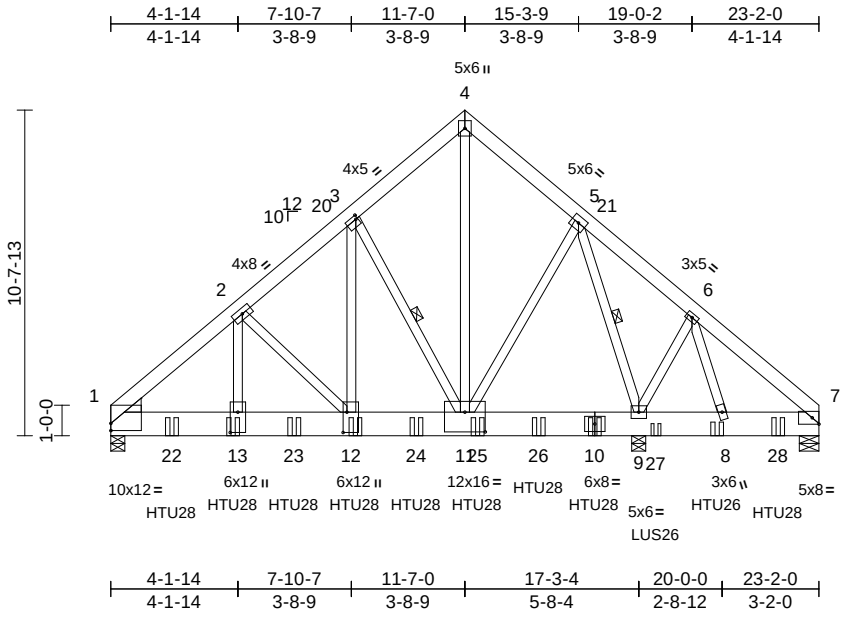

Scale = 1:75.4

Plate Offsets (X, Y): [1:Edge,0-2-13], [3:0-0-12,0-1-8], [11:0-8-0,0-7-12], [12:0-8-0,0-1-8], [13:0-8-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.10	12-13	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.38	Vert(CT)	-0.17	12-13	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.75	Horz(CT)	0.02	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 482 lb	FT = 20%

LUMBER

TOP CHORD	2x6 SP No.2
BOT CHORD	2x10 SP 2400F 2.0E
WEBS	2x4 SP No.2
WEDGE	Left: 2x6 SP No.2

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-6-6 oc purlins.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS	1 Row at midpt 3-11, 5-9

REACTIONS (size) 1=0-5-8, 7=0-7-12, 9=0-5-8
Max Horiz 1=-227 (LC 35)
Max Uplift 1=-288 (LC 12), 7=-190 (LC 12), 9=-863 (LC 13)
Max Grav 1=9134 (LC 5), 7=639 (LC 19), 9=12950 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=-10863/356, 2-3=-8108/309, 3-4=-5131/267, 4-5=-5078/283, 5-6=-64/179, 6-7=-150/560
BOT CHORD	1-13=-347/8235, 12-13=-347/8235, 11-12=-219/6214, 9-11=-48/1902, 8-9=-182/82, 7-8=-355/52
WEBS	2-13=-94/3732, 2-12=-2894/219, 3-12=-220/5944, 3-11=-4828/324, 4-11=-266/6114, 5-11=-155/4320, 5-9=-7328/323, 6-9=-249/300, 6-8=-627/6

NOTES

1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected as follows: 2x10 - 3 rows staggered at 0-4-0 oc.
Web connected as follows: 2x4 - 1 row at 0-9-0 oc, Except member 2-13 2x4 - 1 row at 0-3-0 oc, member 3-12 2x4 - 1 row at 0-6-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 1 and 7. This connection is for uplift only and does not consider lateral forces.
10) LGT2 Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9. This connection is for uplift only and does not consider lateral forces.
11) Use Simpson Strong-Tie HTU28 (20-16d Girder, 26-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 2-0-0 from the left end to 15-10-0 to connect truss(es) to back face of bottom chord.
12) Use Simpson Strong-Tie LUS26 (4-10d Girder, 3-10d Truss) or equivalent at 17-10-0 from the left end to connect truss(es) to back face of bottom chord.
13) Use Simpson Strong-Tie HTU26 (10-16d Girder, 14-10dx1 1/2 Truss) or equivalent at 19-10-0 from the left end to connect truss(es) to back face of bottom chord.
14) Use Simpson Strong-Tie HTU28 (26-16d Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent at 21-10-0 from the left end to connect truss(es) to back face of bottom chord.
15) Fill all nail holes where hanger is in contact with lumber.

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16) LGT2 Hurricane ties must have two studs in line below the truss.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-4=-60, 4-7=-60, 14-17=-20
   Concentrated Loads (lb)
   Vert: 10=-1890 (B), 13=-1890 (B), 12=-1890 (B), 8=-828 (B), 22=-1890 (B), 23=-1890 (B), 24=-1890 (B), 25=-1890 (B), 26=-1890 (B), 27=-828 (B), 28=-828 (B)

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	B03	Common Supported Gable	1	1	I73103586 Job Reference (optional)

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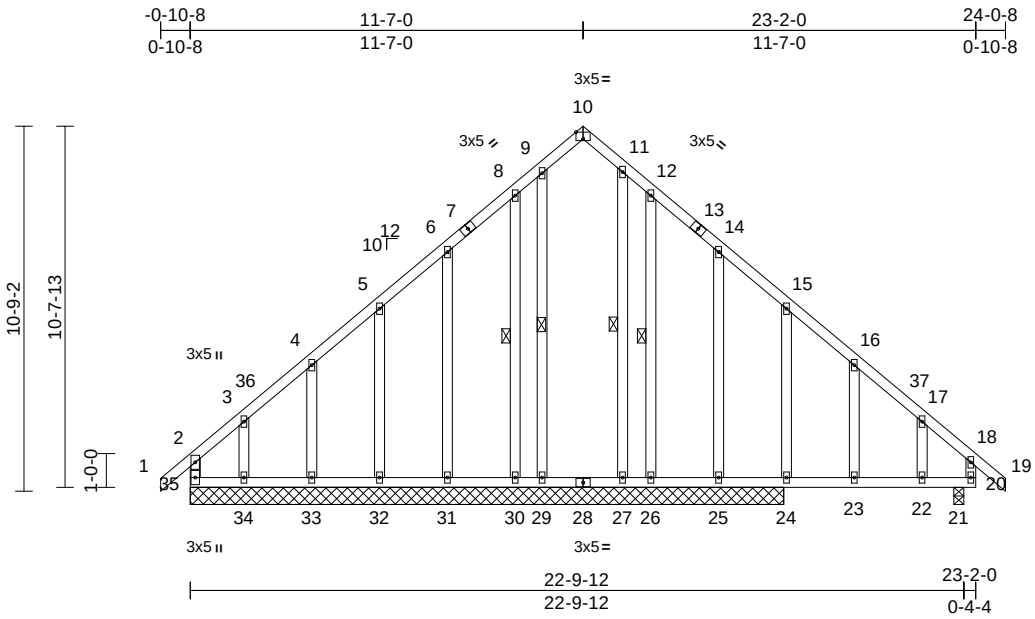

Scale = 1:67.9

Plate Offsets (X, Y): [10:0-2-8,Edge]

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	0.04	22-23	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.22	Vert(CT)	-0.04	22-23	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.16	Horz(CT)	-0.02	10	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 188 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 9-29, 11-27, 8-30, 12-26

REACTIONS (size) 10=17-6-0, 21=0-3-8, 24=17-6-0, 25=17-6-0, 26=17-6-0, 27=17-6-0, 29=17-6-0, 30=17-6-0, 31=17-6-0, 32=17-6-0, 33=17-6-0, 34=17-6-0, 35=17-6-0
Max Horiz 35=-262 (LC 12)
Max Uplift 10=-172 (LC 13), 21=-85 (LC 15), 24=-204 (LC 15), 25=-12 (LC 14), 26=-82 (LC 15), 27=-7 (LC 15), 29=-17 (LC 14), 30=-60 (LC 14), 31=-76 (LC 14), 32=-77 (LC 14), 33=-61 (LC 14), 34=-179 (LC 11), 35=-244 (LC 10)
Max Grav 10=475 (LC 15), 21=340 (LC 26), 24=486 (LC 26), 25=111 (LC 22), 26=214 (LC 22), 27=140 (LC 6), 29=155 (LC 5), 30=177 (LC 21), 31=211 (LC 21), 32=196 (LC 25), 33=194 (LC 30), 34=227 (LC 30), 35=389 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-35=-304/195, 1-2=0/38, 2-3=-332/271, 3-4=-259/221, 4-5=-253/265, 5-6=-235/308, 6-8=-253/357, 8-9=-270/407, 9-10=-285/438, 10-11=-285/439, 11-12=-272/409, 12-14=-247/354, 14-15=-247/290, 15-16=-137/186, 16-17=-159/128, 17-18=-158/69, 18-19=0/38, 18-20=-206/122
BOT CHORD 34-35=-27/100, 33-34=-27/100, 32-33=-27/100, 31-32=-27/100, 30-31=-27/100, 29-30=-27/100, 27-29=-27/100, 26-27=-27/100, 25-26=-27/100, 24-25=-27/100, 23-24=-27/100, 22-23=-27/100, 21-22=-27/100, 20-21=-27/100
WEBS 9-29=-84/38, 11-27=-82/36, 8-30=-157/72, 6-31=-170/101, 5-32=-143/97, 4-33=-154/99, 3-34=-135/130, 12-26=-168/79, 14-25=-132/77, 15-24=-269/150, 16-23=-54/68, 17-22=-81/70

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-1-8, Exterior(2N) 2-1-8 to 8-7-0, Corner(3R) 8-7-0 to 14-7-0, Exterior(2N) 14-7-0 to 21-0-8, Corner(3E) 21-0-8 to 24-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
12) Bearing at joint(s) 10 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.

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13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 172 lb uplift at joint 10.

LOAD CASE(S) Standard

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	C01	Half Hip	4	1	I73103587 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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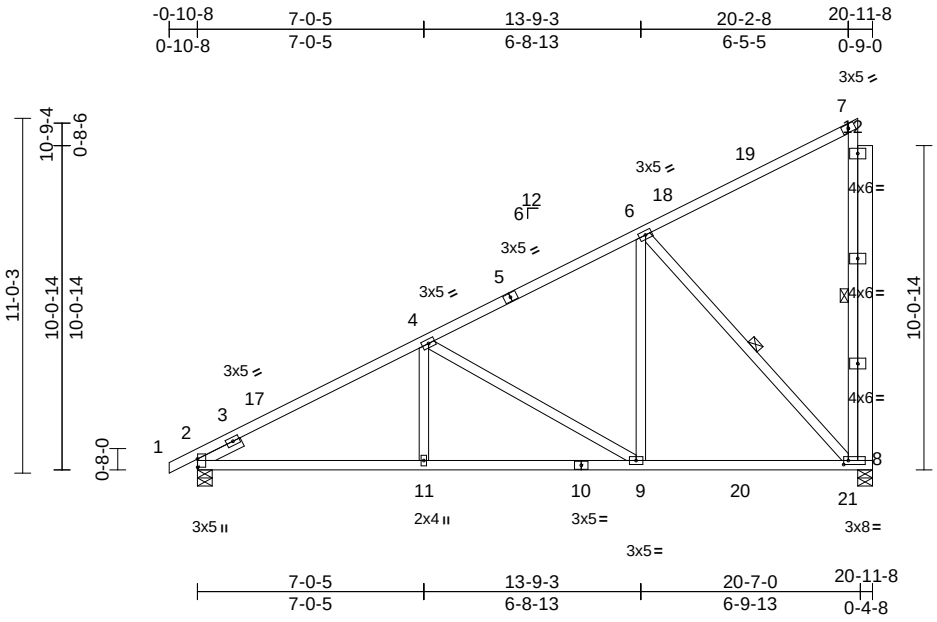

Scale = 1:71.5

Plate Offsets (X, Y): [2:0-3-1,0-0-1], [8:0-1-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.83	Vert(LL)	-0.08	8-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.62	Vert(CT)	-0.14	8-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.79	Horz(CT)	0.03	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 148 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 7-8:2x4 SP No.2
OTHERS 2x6 SP No.2
SLIDER Left 2x4 SP No.3 -- 1-6-0

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-8-11 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 7-8, 6-8

REACTIONS (size) 2=0-5-8, 8=0-5-8
Max Horiz 2=387 (LC 14)
Max Uplift 2=-49 (LC 14), 8=-342 (LC 14)
Max Grav 2=954 (LC 5), 8=1731 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/23, 2-4=-1437/30, 4-6=-824/0, 6-7=-166/102, 7-8=-270/93
BOT CHORD 2-11=-399/1321, 9-11=-320/1321, 8-9=-159/721
WEBS 4-11=0/263, 4-9=-691/185, 6-9=0/637, 6-8=-1026/227

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 17-4-4, Exterior(2E) 17-4-4 to 20-4-4 zone; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) All plates are 3x5 MT20 unless otherwise indicated.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
8) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 8 and 2. This connection is for uplift only and does not consider lateral forces.
9) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 752 lb down and 128 lb up at 20-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-7=-60, 8-13=-20
Concentrated Loads (lb)
Vert: 8=-747

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Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	C02	Half Hip	1	1	I73103588 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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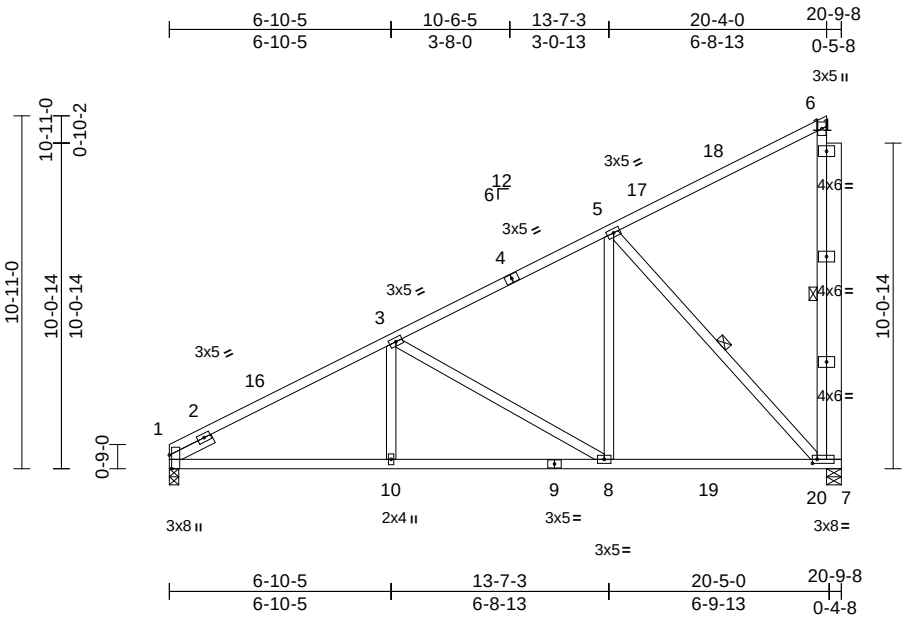


Scale = 1:71.3

Plate Offsets (X, Y): [1:0-5-1,Edge], [7:0-1-12,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.82	Vert(LL)	-0.08	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.63	Vert(CT)	-0.14	7-8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.03	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 146 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 6-7:2x4 SP No.2
OTHERS	2x6 SP No.2
SLIDER	Left 2x4 SP No.3 -- 1-6-0

BRACING

TOP CHORD	Structural wood sheathing directly applied or 4-7-1 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 6-7, 5-7

REACTIONS (size) 1=0-3-8, 7=0-5-8
Max Horiz 1=370 (LC 14)
Max Uplift 1=-30 (LC 14), 7=-342 (LC 14)
Max Grav 1=900 (LC 5), 7=1714 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-3=-1401/30, 3-5=-812/0, 5-6=-162/100, 6-7=-265/93
BOT CHORD	1-10=-405/1286, 8-10=-319/1286, 7-8=-159/716
WEBS	3-10=0/254, 3-8=-658/185, 5-8=0/624, 5-7=-1018/227

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-2-0 to 3-2-0, Interior (1) 3-2-0 to 17-4-4, Exterior(2E) 17-4-4 to 20-4-4 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
6) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 7 and 1. This connection is for uplift only and does not consider lateral forces.
7) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 752 lb down and 129 lb up at 20-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard

1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (lb/ft)
   Vert: 1-6=-60, 7-12=-20
   Concentrated Loads (lb)
   Vert: 7=-747

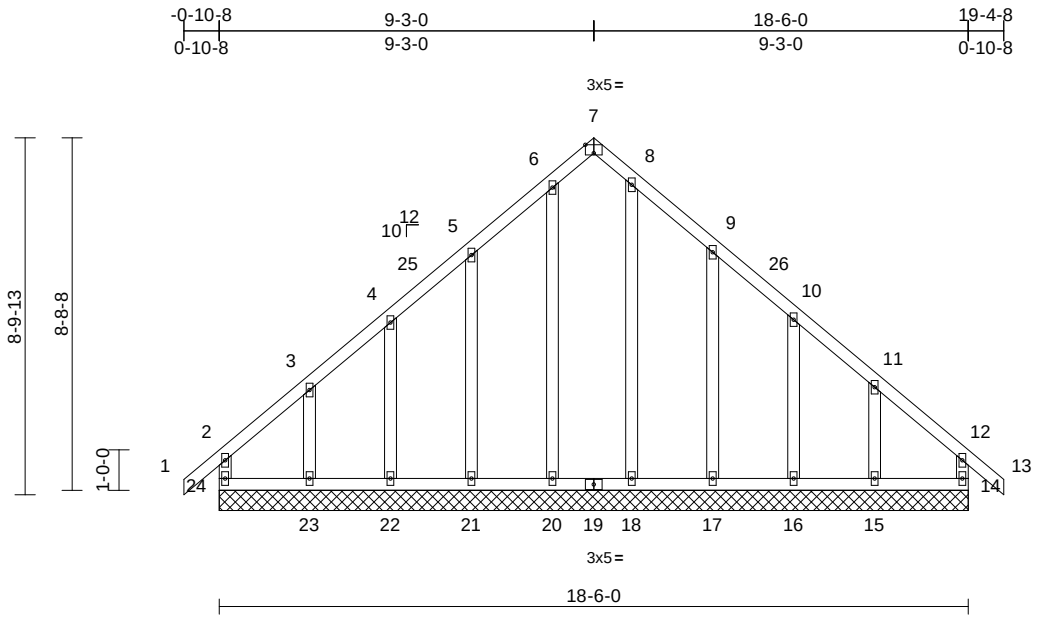
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	D01	Common Supported Gable	1	1	I73103589 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:18 ID:8F2D?hHuvW?rb9K6OMb_Y2zRQrE-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:56.9

Plate Offsets (X, Y): [7:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.21	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.20	Horz(CT)	0.00	14	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 127 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3
OTHERS	2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 14=18-6-0, 15=18-6-0, 16=18-6-0, 17=18-6-0, 18=18-6-0, 20=18-6-0, 21=18-6-0, 22=18-6-0, 23=18-6-0, 24=18-6-0

Max Horiz 24=-225 (LC 12)

Max Uplift 14=-48 (LC 11), 15=-163 (LC 15), 16=-46 (LC 15), 17=-117 (LC 15), 21=-114 (LC 14), 22=-47 (LC 14), 23=-168 (LC 14), 24=-71 (LC 10)

Max Grav 14=190 (LC 30), 15=223 (LC 26), 16=173 (LC 22), 17=255 (LC 22), 18=222 (LC 22), 20=227 (LC 21), 21=252 (LC 21), 22=172 (LC 21), 23=226 (LC 25), 24=206 (LC 26)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD 2-24=-168/64, 1-2=0/39, 2-3=-165/141, 3-4=-106/91, 4-5=-93/116, 5-6=-115/233, 6-7=-96/175, 7-8=-92/166, 8-9=-117/238, 9-10=-76/119, 10-11=-89/71, 11-12=-151/116, 12-13=0/39, 12-14=-155/46

BOT CHORD 23-24=-105/187, 22-23=-105/187, 21-22=-105/187, 20-21=-105/187, 18-20=-105/187, 17-18=-105/187, 16-17=-105/187, 15-16=-105/187, 14-15=-105/187

WEBS 6-20=-187/8, 8-18=-183/11, 5-21=-212/161, 4-22=-142/94, 3-23=-172/158, 9-17=-214/164, 10-16=-143/90, 11-15=-170/170

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-2-12, Exterior(2N) 2-2-12 to 6-2-12, Corner(3R) 6-2-12 to 12-2-4, Exterior (2N) 12-2-4 to 16-2-4, Corner(3E) 16-2-4 to 19-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
10) Gable studs spaced at 2-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 71 lb uplift at joint 24, 48 lb uplift at joint 14, 114 lb uplift at joint 21, 47 lb uplift at joint 22, 168 lb uplift at joint 23, 117 lb uplift at joint 17, 46 lb uplift at joint 16 and 163 lb uplift at joint 15.

LOAD CASE(S) Standard

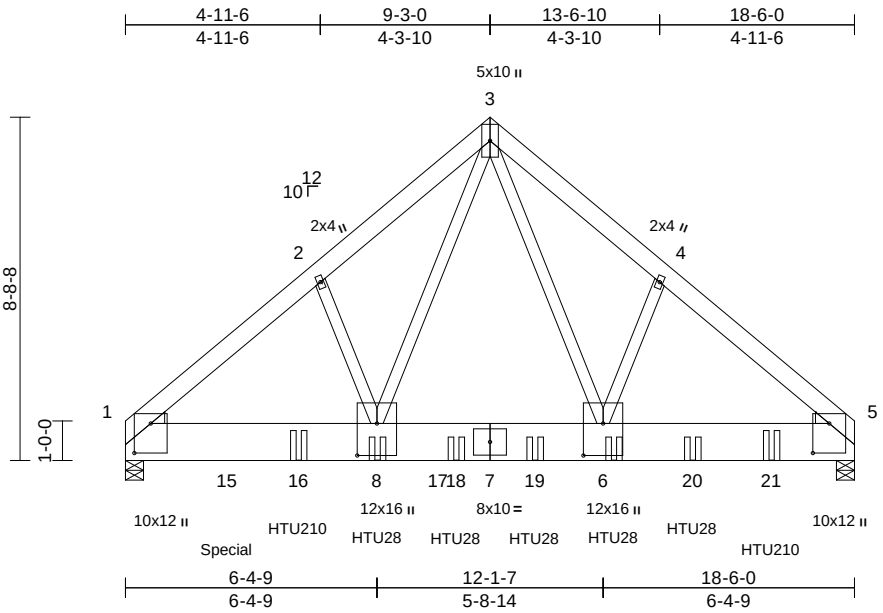
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	D02	Common Girder	1	3	I73103590 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:19 ID:ahvaep5BsMWascBuTkn6buzRAib-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:58.5

Plate Offsets (X, Y): [1:0-9-0,0-5-0], [5:0-9-0,0-5-0], [6:0-9-12,0-6-0], [8:0-9-12,0-6-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.37	Vert(LL)	-0.09	8-11	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.52	Vert(CT)	-0.15	8-11	>999	180		
TCDL	10.0	Rep Stress Incr	NO	WB	0.87	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 546 lb	FT = 20%

LUMBER
TOP CHORD 2x6 SP No.2
BOT CHORD 2x12 SP 2400F 2.0E
WEBS 2x4 SP No.2 *Except* 8-2,6-4:2x4 SP No.3
WEDGE Left: 2x4 SP No.3
Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 5=0-5-8
Max Horiz 1=181 (LC 11)
Max Grav 1=14963 (LC 21), 5=10831 (LC 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-14218/0, 2-3=-14152/0, 3-4=-12497/0, 4-5=-12624/0
BOT CHORD 1-8=0/10921, 6-8=0/7222, 5-6=0/9610
WEBS 3-8=0/10693, 2-8=-243/269, 3-6=0/6972, 4-6=-157/266

NOTES
1) 3-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Bottom chords connected with Simpson SDS 1/4 x 4-1/2 screws as follows: 2x12 - 3 rows staggered at 0-4-0 oc.
Web chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.60 plate grip DOL=1.60
5) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
6) Unbalanced snow loads have been considered for this design.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
9) Use Simpson Strong-Tie HTU210 (32-10dx1 1/2 Girder, 14-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 12-0-0 oc max. starting at 4-4-12 from the left end to 16-4-12 to connect truss(es) to back face of bottom chord.
10) Use Simpson Strong-Tie HTU28 (20-16d Girder, 26-10dx1 1/2 Truss, Single Ply Girder) or equivalent spaced at 2-0-0 oc max. starting at 6-4-12 from the left end to 14-4-12 to connect truss(es) to back face of bottom chord.
11) Fill all nail holes where hanger is in contact with lumber.
12) Hanger(s) or other connection device(s) shall be provided sufficient to support concentrated load(s) 8869 lb down and 536 lb up at 2-7-0 on bottom chord. The design/selection of such connection device(s) is the responsibility of others.

LOAD CASE(S) Standard
1) Dead + Snow (balanced): Lumber Increase=1.15, Plate Increase=1.15
Uniform Loads (lb/ft)
Vert: 1-3=-60, 3-5=-60, 9-12=-20
Concentrated Loads (lb)
Vert: 8=-1893 (B), 6=-1893 (B), 15=-5509 (B), 16=-1897 (B), 18=-1893 (B), 19=-1893 (B), 20=-1893 (B), 21=-1893 (B)

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	E01	Common	1	1	I73103591 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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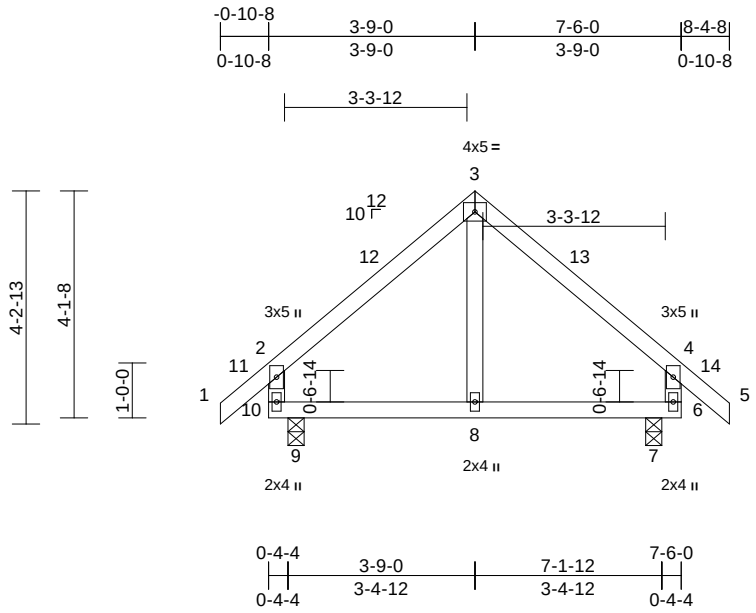


Scale = 1:41.9

Loading	(psf)	Spacing	1-11-4	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.40	Vert(LL)	-0.01	8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.29	Vert(CT)	-0.02	8	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.03	Horz(CT)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MR								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 7=0-3-8, 9=0-3-8
Max Horiz 9=-114 (LC 12)
Max Uplift 7=-38 (LC 15), 9=-38 (LC 14)
Max Grav 7=460 (LC 22), 9=460 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/49, 2-3=-269/94, 3-4=-269/92, 4-5=0/49, 2-10=-375/177, 4-6=-375/175
BOT CHORD 9-10=-11/120, 8-9=-11/122, 7-8=-11/122, 6-7=-11/122
WEBS 3-8=-26/84

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Exterior(2R) 2-1-8 to 5-4-8, Exterior(2E) 5-4-8 to 8-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
8) H10A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 7. This connection is for uplift only and does not consider lateral forces.

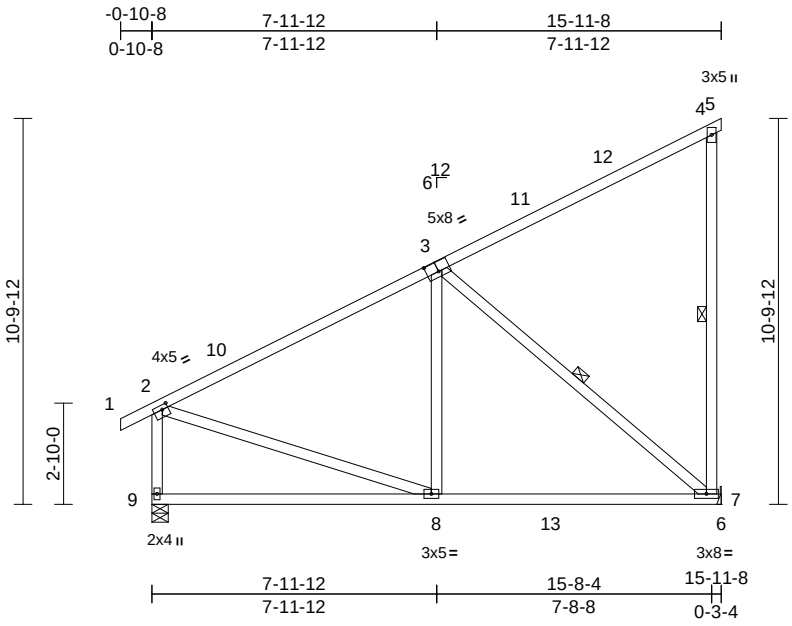
LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	G01	Monopitch	5	1	I73103592 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:19 Page: 1
ID:PdAAD85_ICJN?UaWrZNnF5zRQu2-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:64.6

Plate Offsets (X, Y): [2:0-2-0,0-1-8], [3:0-4-0,0-3-4]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.95	Vert(LL)	-0.12	7-8	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.67	Vert(CT)	-0.20	7-8	>923	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.39	Horz(CT)	-0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 106 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.1 *Except* 1-3:2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 4-7:2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-2-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-7, 3-7

REACTIONS (size) 7= Mechanical, 9=0-5-8
Max Horiz 9=273 (LC 14)
Max Uplift 7=-221 (LC 14)
Max Grav 7=831 (LC 5), 9=754 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/27, 2-4=-677/119, 4-5=-12/0, 4-7=-328/122, 2-9=-655/84
BOT CHORD 8-9=-334/218, 7-8=-195/603, 6-7=0/0
WEBS 3-8=0/313, 3-7=-768/250, 2-8=0/486

NOTES
1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 12-11-8, Exterior(2E) 12-11-8 to 15-11-8 zone; cantilever left and right exposed ; end vertical left exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
7) Refer to girder(s) for truss to truss connections.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 221 lb uplift at joint 7.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	H01	Monopitch Supported Gable	2	1	I73103593 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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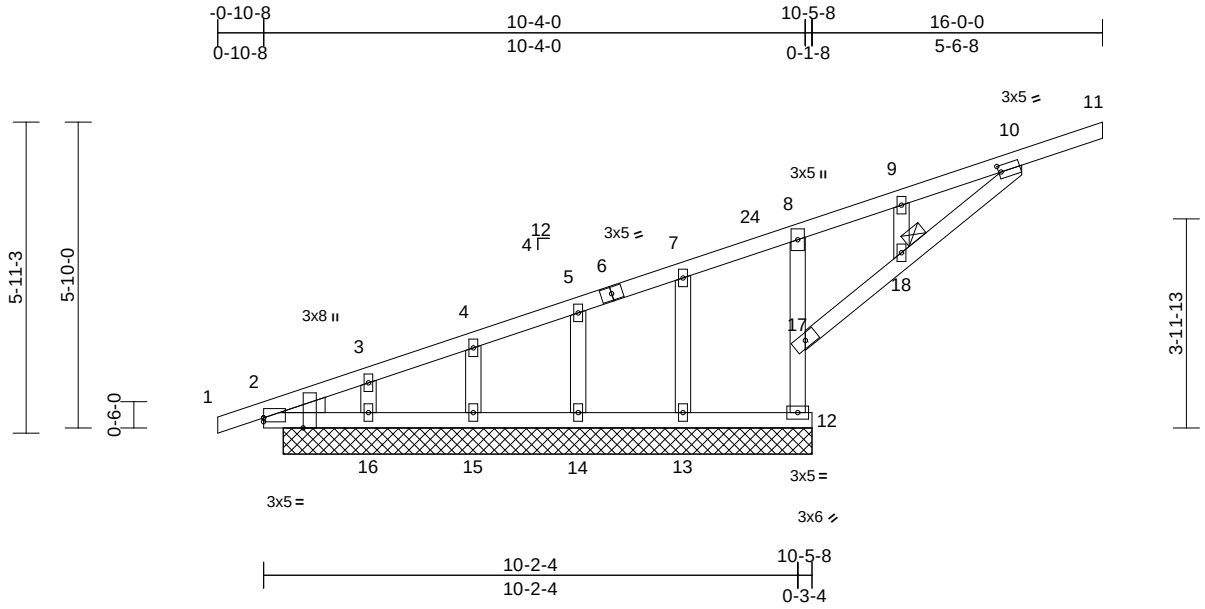

Scale = 1:43.9

Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-2-5,Edge], [10:0-0-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.99	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.26	Horz(CT)	-0.08	17	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 68 lb	FT = 20%

LUMBER

TOP CHORD	2x4 SP No.2
BOT CHORD	2x4 SP No.2
WEBS	2x4 SP No.3 *Except* 8-12:2x4 SP No.2
OTHERS	2x4 SP No.3
WEDGE	Left: 2x4 SP No.3

BRACING

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals. Except: 9-5-0 oc bracing: 12-17
BOT CHORD	Rigid ceiling directly applied or 6-0-0 oc bracing.
JOINTS	1 Brace at Jt(s): 18

REACTIONS (size) 2=10-1-0, 12=10-1-0, 13=10-1-0, 14=10-1-0, 15=10-1-0, 16=10-1-0, 17=10-1-0
Max Horiz 2=180 (LC 10)
Max Uplift 2=-48 (LC 21), 12=-72 (LC 21), 13=-9 (LC 10), 14=-41 (LC 14), 15=-26 (LC 10), 16=-98 (LC 14), 17=-271 (LC 10)
Max Grav 2=123 (LC 14), 12=39 (LC 10), 13=129 (LC 1), 14=172 (LC 21), 15=158 (LC 1), 16=217 (LC 21), 17=875 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension

TOP CHORD	1-2=0/17, 2-3=-710/428, 3-4=-650/422, 4-5=-606/425, 5-7=-544/407, 7-8=-542/476, 8-9=-633/630, 9-10=-632/697, 10-11=-45/0, 12-17=0/0, 8-17=-364/285
BOT CHORD	2-16=-383/370, 15-16=-383/370, 14-15=-383/370, 13-14=-383/370, 12-13=-383/370
WEBS	3-16=-145/179, 4-15=-125/117, 5-14=-168/172, 7-13=-33/56, 17-18=-793/656, 10-18=-801/669, 9-18=-21/26

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Corner(3E) -0-10-8 to 2-0-0, Exterior(2N) 2-0-0 to 16-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable studs spaced at 2-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Bearing at joint(s) 17 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 72 lb uplift at joint 12, 98 lb uplift at joint 16 and 9 lb uplift at joint 13.
12) N/A
13) Non Standard bearing condition. Review required.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	H02	Monopitch	6	1	I73103594 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:19 Page: 1

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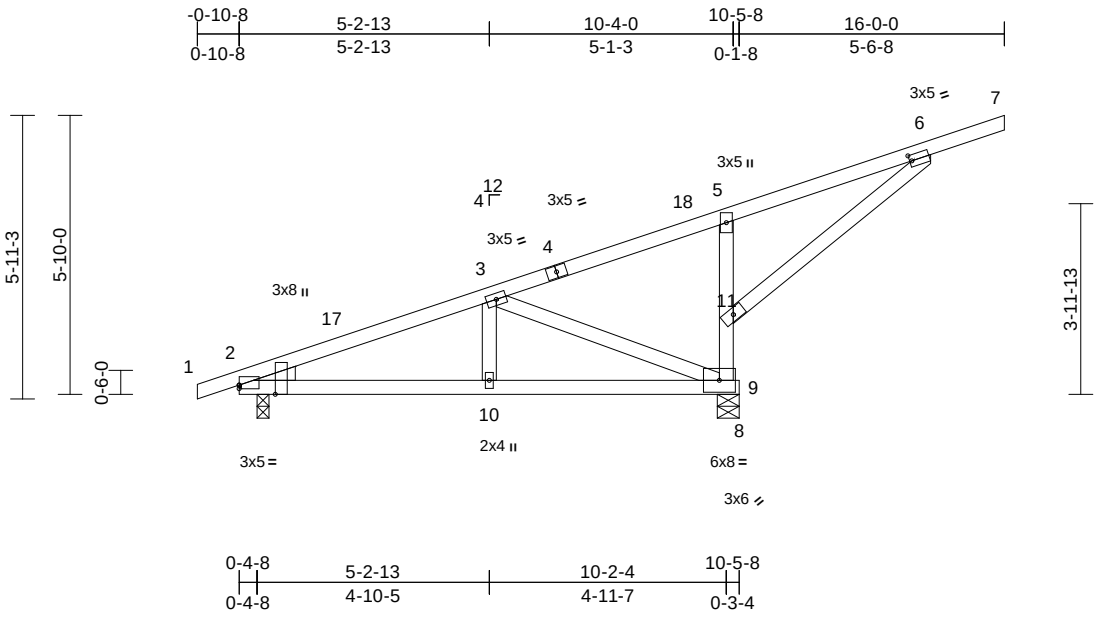

Scale = 1:48.2

Plate Offsets (X, Y): [2:Edge,0-0-14], [2:0-2-5,Edge], [6:0-0-8,0-1-8]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.78	Vert(LL)	0.03	9-10	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.05	9-10	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.50	Horz(CT)	0.01	9	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 66 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3 *Except* 5-9:2x4 SP No.1
WEDGE Left: 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
Except:
5-3-0 oc bracing: 9-11
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=0-3-0, 9=0-5-8
Max Horiz 2=207 (LC 10)
Max Uplift 2=-100 (LC 10), 9=-371 (LC 10)
Max Grav 2=377 (LC 1), 9=1084 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-368/82, 3-5=-393/465, 5-6=-456/707, 6-7=-45/0, 9-11=-847/467, 5-11=-321/163
BOT CHORD 2-10=-230/338, 9-10=-230/338, 8-9=0/0
WEBS 3-10=-124/211, 3-9=-614/478, 6-11=-811/468

NOTES

1) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) -0-10-8 to 2-1-8, Interior (1) 2-1-8 to 16-0-0 zone; cantilever left exposed ; porch left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
3) Unbalanced snow loads have been considered for this design.
4) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 9 and 2. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	J01	Common	5	1	I73103595 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:19 Page: 1
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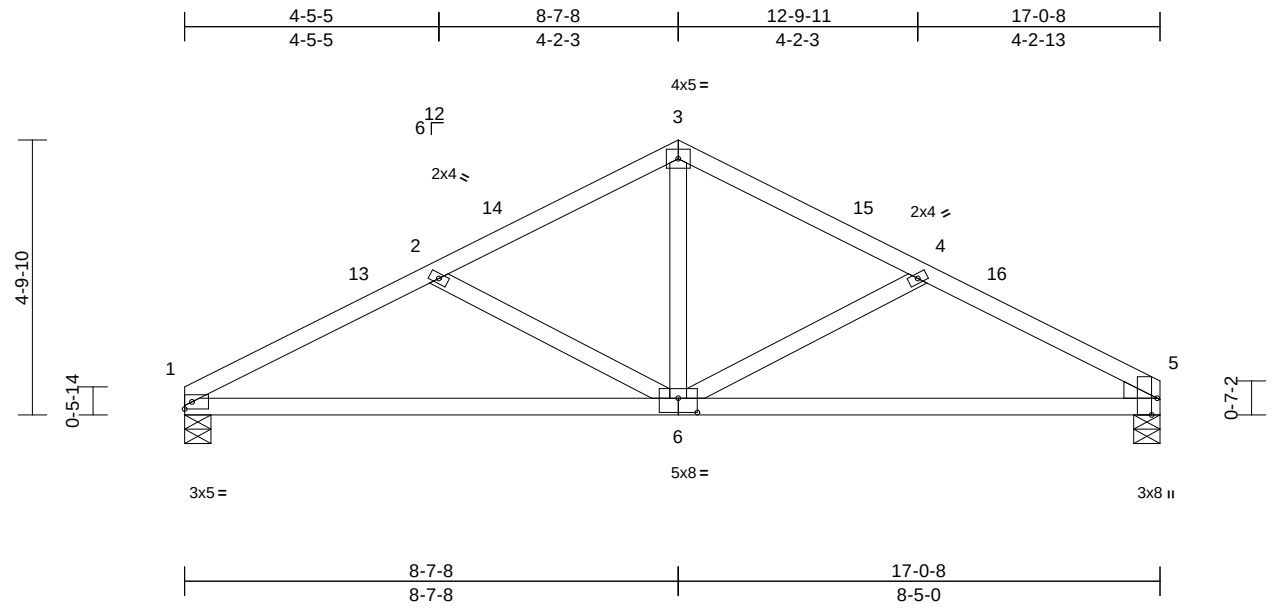


Scale = 1:40.3

Plate Offsets (X, Y): [5:0-3-8,Edge], [6:0-4-0,0-3-0]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.09	6-9	>999	240	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.64	Vert(CT)	-0.19	6-9	>999	180		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horz(CT)	0.02	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 75 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
WEBS 2x4 SP No.3
WEDGE Right: 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 5-1-15 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=0-5-8, 5=0-5-8
Max Horiz 1=71 (LC 14)
Max Uplift 1=-66 (LC 14), 5=-64 (LC 15)
Max Grav 1=747 (LC 20), 5=746 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1256/309, 2-3=-879/232, 3-4=-871/231, 4-5=-1211/300
BOT CHORD 1-5=-221/1083
WEBS 3-6=-51/474, 4-6=-401/159, 2-6=-439/174

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-0 to 3-0-0, Interior (1) 3-0-0 to 5-7-8, Exterior(2R) 5-7-8 to 11-7-8, Interior (1) 11-7-8 to 14-0-8, Exterior(2E) 14-0-8 to 17-0-8 zone;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
7) Bearings are assumed to be: , Joint 5 SP No.2 .
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 66 lb uplift at joint 1.
9) One H2.5A Simpson Strong-Tie connectors recommended to connect truss to bearing walls due to UPLIFT at jt(s) 5. This connection is for uplift only and does not consider lateral forces.

LOAD CASE(S) Standard

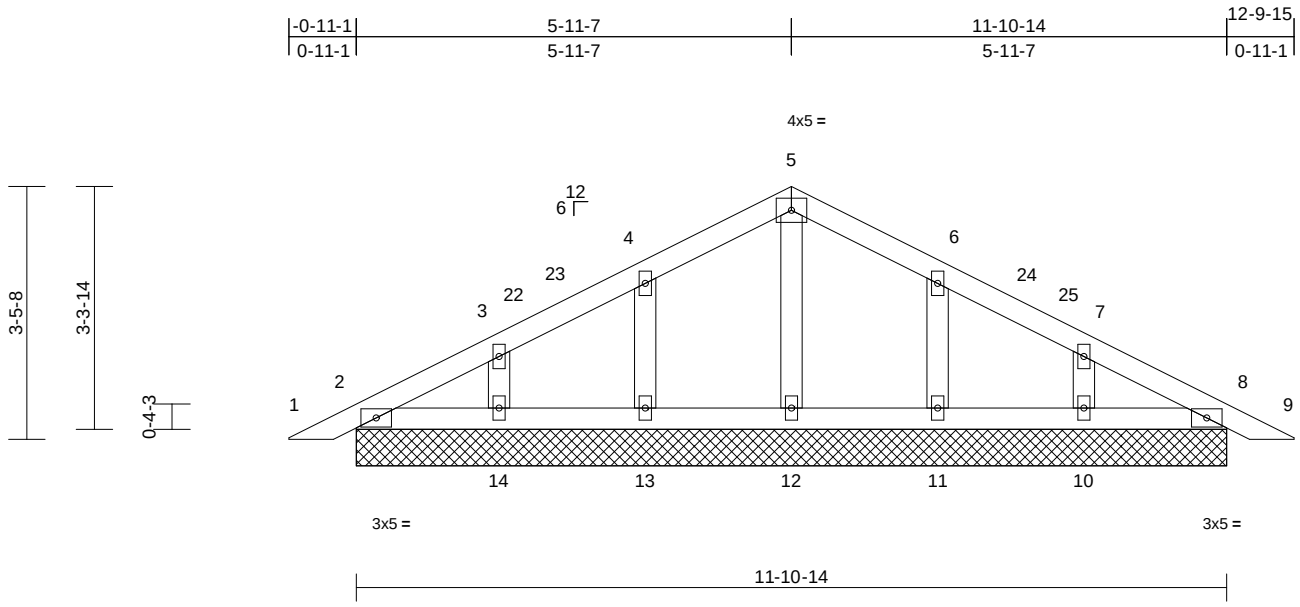
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	PBA	Piggyback	2	1	I73103596 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:19 ID:RPY8AW_GFKIcY3mFoYebvHzRQqK-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:31.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.08	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.04	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horz(CT)	0.00	8	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 52 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-10-14, 8=11-10-14, 10=11-10-14, 11=11-10-14, 12=11-10-14, 13=11-10-14, 14=11-10-14
Max Horiz 2=52 (LC 18)
Max Uplift 2=-9 (LC 15), 8=-12 (LC 15), 10=-45 (LC 15), 11=-47 (LC 15), 13=-47 (LC 14), 14=-46 (LC 14)
Max Grav 2=125 (LC 21), 8=125 (LC 22), 10=240 (LC 22), 11=243 (LC 22), 12=143 (LC 22), 13=243 (LC 21), 14=240 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-46/33, 3-4=-56/49, 4-5=-64/107, 5-6=-64/107, 6-7=-56/42, 7-8=-30/26, 8-9=0/17
BOT CHORD 2-14=-9/58, 13-14=-9/58, 12-13=-9/58, 11-12=-9/58, 10-11=-9/58, 8-10=-9/58
WEBS 5-12=-102/0, 4-13=-207/121, 3-14=-183/88, 6-11=-207/121, 7-10=-183/88

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 3-4-3, Interior (1) 3-4-3 to 3-11-0, Exterior(2R) 3-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-13, Exterior(2E) 10-5-13 to 13-5-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
7) All plates are 2x4 MT20 unless otherwise indicated.
8) Gable requires continuous bottom chord bearing.
9) Gable studs spaced at 2-0-0 oc.
10) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
11) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
12) N/A
13) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	PBA1	Piggyback	18	1	I73103597 Job Reference (optional)

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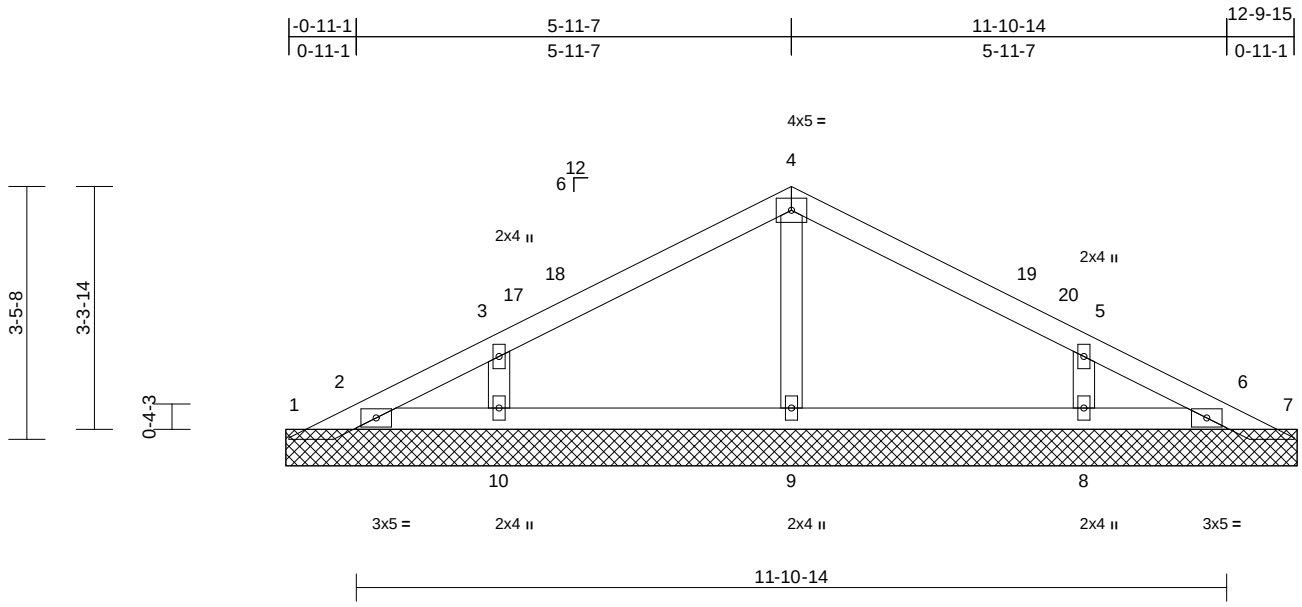

Scale = 1:31.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.29	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 47 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=13-10-0, 2=13-10-0, 6=13-10-0, 7=13-10-0, 8=13-10-0, 9=13-10-0, 10=13-10-0
Max Horiz 1=52 (LC 18)
Max Uplift 1=-26 (LC 15), 7=-11 (LC 15), 8=-92 (LC 15), 10=-91 (LC 14)
Max Grav 1=45 (LC 21), 2=69 (LC 1), 6=57 (LC 1), 7=47 (LC 22), 8=439 (LC 22), 9=299 (LC 21), 10=440 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-56/65, 2-3=-54/48, 3-4=-124/94, 4-5=-124/94, 5-6=-36/48, 6-7=-19/15
BOT CHORD 2-10=-8/45, 9-10=-8/45, 8-9=-8/45, 6-8=-8/45
WEBS 4-9=-213/92, 3-10=-385/205, 5-8=-384/205

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 3-4-3, Interior (1) 3-4-3 to 3-11-0, Exterior(2R) 3-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-13, Exterior(2E) 10-5-13 to 13-5-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 26 lb uplift at joint 1 and 11 lb uplift at joint 7.
11) N/A
12) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	PBA2	Piggyback	2	4	I73103598 Job Reference (optional)

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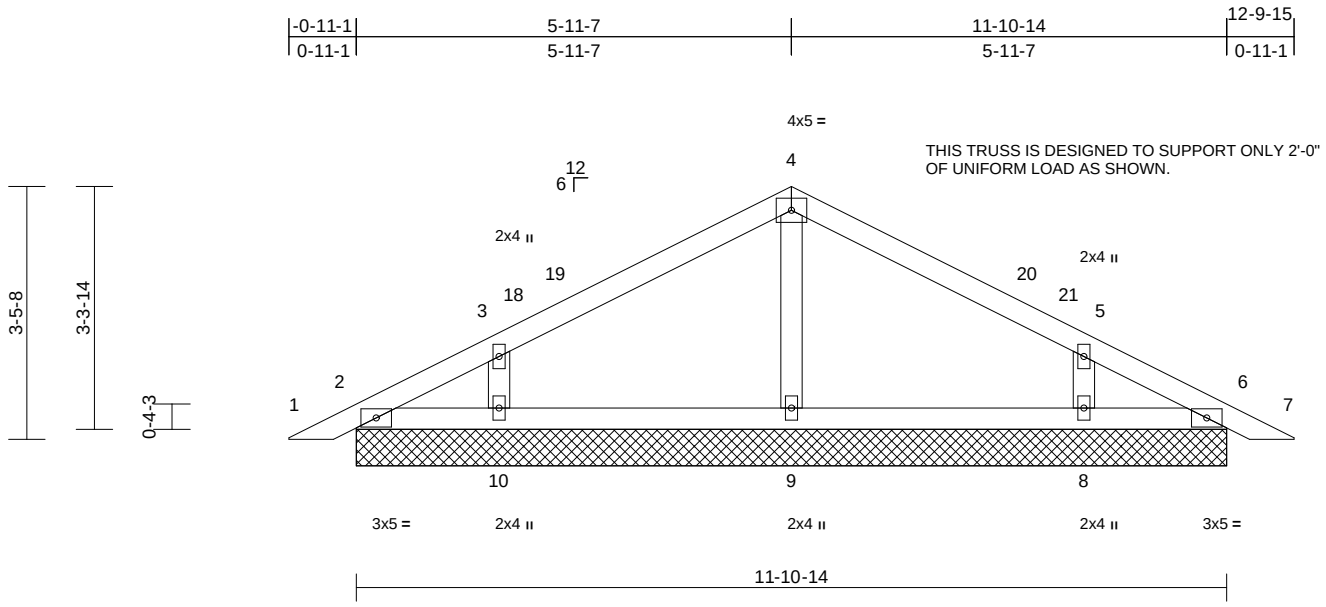

Scale = 1:31.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.07	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.03	Vert(CT)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.02	Horz(CT)	0.00	15	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 188 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 2=11-10-14, 6=11-10-14, 8=11-10-14, 9=11-10-14, 10=11-10-14
Max Horiz 2=52 (LC 18)
Max Uplift 2=-11 (LC 15), 6=-4 (LC 11), 8=-87 (LC 15), 10=-87 (LC 14)
Max Grav 2=86 (LC 1), 6=86 (LC 1), 8=423 (LC 22), 9=302 (LC 21), 10=423 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/17, 2-3=-53/45, 3-4=-123/96, 4-5=-123/96, 5-6=-33/45, 6-7=0/17
BOT CHORD 2-10=-8/47, 9-10=-2/46, 8-9=-2/46, 6-8=-8/47
WEBS 4-9=-215/91, 3-10=-375/198, 5-8=-375/198

NOTES
1) 4-ply truss to be connected together as follows:
Top chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected with 10d (0.131"x3") nails as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Unbalanced roof live loads have been considered for this design.
4) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-3 to 3-4-3, Interior (1) 3-4-3 to 3-11-0, Exterior(2R) 3-11-0 to 9-11-0, Interior (1) 9-11-0 to 10-5-13, Exterior(2E) 10-5-13 to 13-5-13 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
5) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
6) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
7) Unbalanced snow loads have been considered for this design.
8) This truss has been designed for greater of min roof live load of 12.0 psf or 1.00 times flat roof load of 20.0 psf on overhangs non-concurrent with other live loads.
9) Gable requires continuous bottom chord bearing.
10) Gable studs spaced at 4-0-0 oc.
11) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
13) N/A
14) See Standard Industry Piggyback Truss Connection Detail for Connection to base truss as applicable, or consult qualified building designer.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB1	Valley	1	1	I73103599 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332, Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:20 Page: 1
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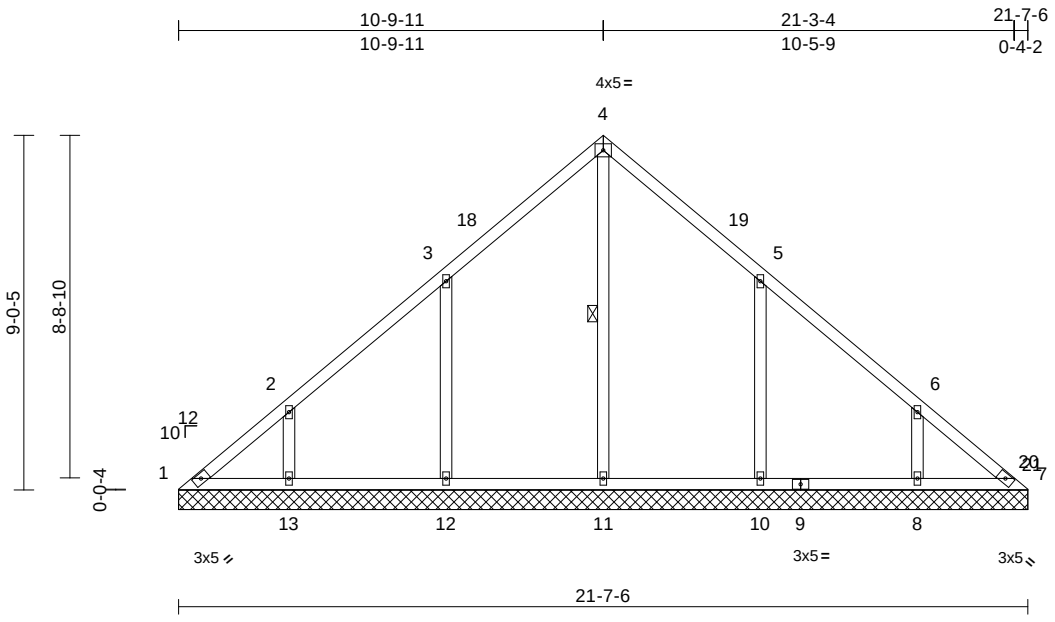

Scale = 1:58.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.21	Horiz(TL)	0.01	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 106 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-11

REACTIONS (size) 1=21-7-6, 7=21-7-6, 8=21-7-6, 10=21-7-6, 11=21-7-6, 12=21-7-6, 13=21-7-6
Max Horiz 1=207 (LC 11)
Max Uplift 1=-48 (LC 10), 7=-6 (LC 11), 8=-114 (LC 15), 10=-174 (LC 15), 12=-173 (LC 14), 13=-120 (LC 14)
Max Grav 1=149 (LC 25), 7=109 (LC 27), 8=362 (LC 25), 10=473 (LC 6), 11=414 (LC 27), 12=473 (LC 5), 13=370 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-213/174, 2-3=-164/132, 3-4=-188/181, 4-5=-188/154, 5-6=-116/82, 6-7=-168/107
BOT CHORD 1-13=-76/154, 12-13=-76/154, 11-12=-76/154, 10-11=-76/154, 8-10=-76/154, 7-8=-76/154
WEBS 4-11=-208/3, 3-12=-376/222, 2-13=-265/163, 5-10=-376/222, 6-8=-264/161

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 2-10-0, Interior (1) 2-10-0 to 7-10-0, Exterior(2R) 7-10-0 to 13-10-0, Interior (1) 13-10-0 to 18-3-3, Exterior(2E) 18-3-3 to 21-3-3 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 48 lb uplift at joint 1, 6 lb uplift at joint 7, 173 lb uplift at joint 12, 120 lb uplift at joint 13, 174 lb uplift at joint 10 and 114 lb uplift at joint 8.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB2	Valley	1	1	I73103600 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:20

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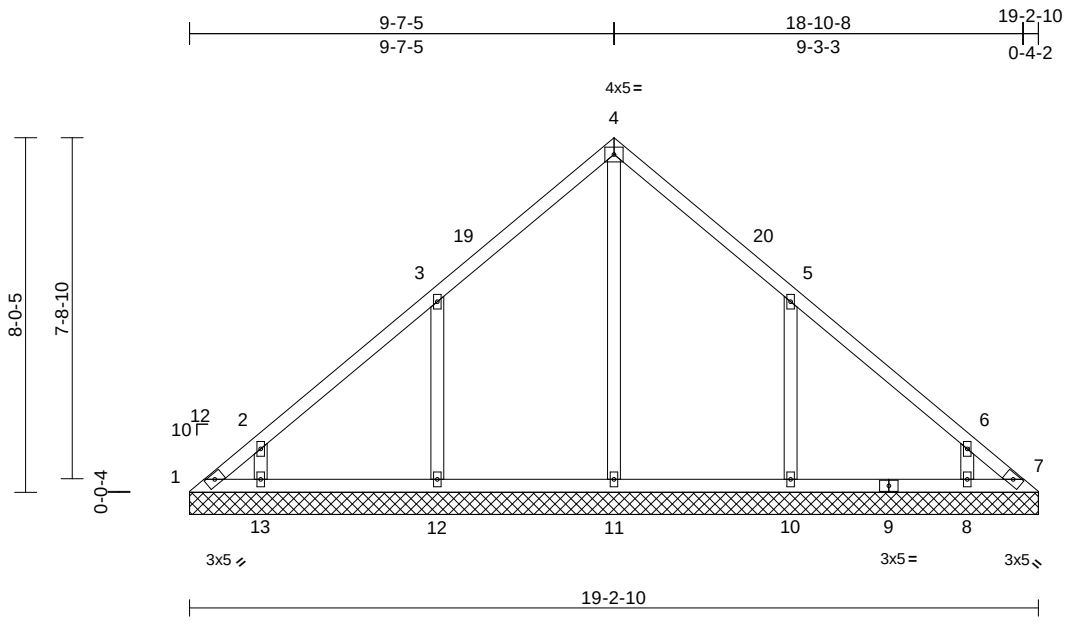


Scale = 1:52.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.17	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.29	Horiz(TL)	0.00	7	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 90 lb	FT = 20%

LUMBER

TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING

TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=19-2-10, 7=19-2-10, 8=19-2-10, 10=19-2-10, 11=19-2-10, 12=19-2-10, 13=19-2-10
Max Horiz 1=184 (LC 11)
Max Uplift 1=-96 (LC 10), 8=-53 (LC 15), 10=-193 (LC 15), 12=-174 (LC 14), 13=-102 (LC 14)
Max Grav 1=123 (LC 13), 7=0 (LC 13), 8=303 (LC 25), 10=477 (LC 25), 11=463 (LC 27), 12=480 (LC 5), 13=317 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-218/205, 2-3=-217/187, 3-4=-207/267, 4-5=-207/241, 5-6=-124/66, 6-7=-72/42
BOT CHORD 1-13=-45/64, 12-13=-18/55, 11-12=-18/55, 10-11=-18/55, 8-10=-18/55, 7-8=-18/55
WEBS 4-11=-255/59, 3-12=-379/222, 2-13=-260/173, 5-10=-376/229, 6-8=-252/154

NOTES

1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 6-7-10, Exterior(2R) 6-7-10 to 12-7-10, Interior (1) 12-7-10 to 15-10-6, Exterior(2E) 15-10-6 to 18-10-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) All plates are 2x4 MT20 unless otherwise indicated.
7) Gable requires continuous bottom chord bearing.
8) Gable studs spaced at 4-0-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 96 lb uplift at joint 1, 174 lb uplift at joint 12, 102 lb uplift at joint 13, 193 lb uplift at joint 10 and 53 lb uplift at joint 8.

LOAD CASE(S) Standard

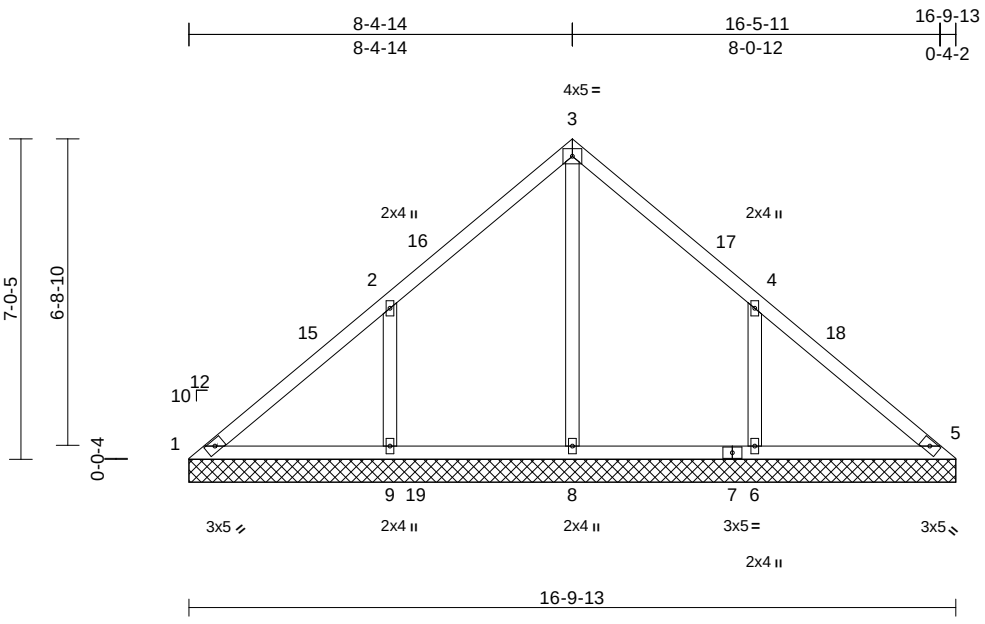
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB3	Valley	1	1	I73103601 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:20 ID:4pahjxh9RSqoCd5h0aDV3jzRQs?-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:50.5

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.41	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 75 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 10-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=16-9-13, 5=16-9-13, 6=16-9-13, 8=16-9-13, 9=16-9-13
Max Horiz 1=160 (LC 11)
Max Uplift 1=-58 (LC 10), 6=-183 (LC 15), 9=-188 (LC 14)
Max Grav 1=82 (LC 35), 5=1 (LC 25), 6=510 (LC 6), 8=654 (LC 24), 9=510 (LC 5)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-105/370, 2-3=-25/319, 3-4=-2/298, 4-5=-139/301
BOT CHORD 1-9=-197/76, 8-9=-197/74, 6-8=-197/74, 5-6=-197/74
WEBS 3-8=-470/0, 2-9=-392/220, 4-6=-392/218

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Interior (1) 3-0-5 to 5-5-3, Exterior(2R) 5-5-3 to 11-5-3, Interior (1) 11-5-3 to 13-10-2, Exterior(2E) 13-10-2 to 16-10-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 58 lb uplift at joint 1, 188 lb uplift at joint 9 and 183 lb uplift at joint 6.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB4	Valley	1	1	I73103602 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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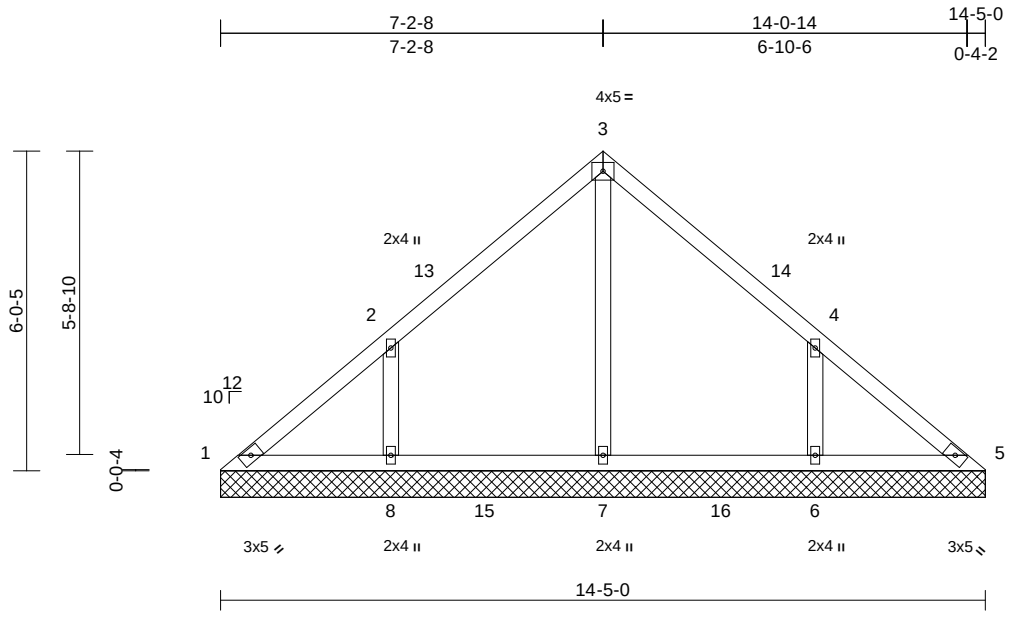

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.14	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 62 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=14-5-0, 5=14-5-0, 6=14-5-0, 7=14-5-0, 8=14-5-0
Max Horiz 1=-137 (LC 10)
Max Uplift 1=-24 (LC 10), 6=-154 (LC 15), 8=-157 (LC 14)
Max Grav 1=123 (LC 25), 5=99 (LC 24), 6=454 (LC 21), 7=403 (LC 24), 8=454 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-152/140, 2-3=-177/118, 3-4=-177/112, 4-5=-121/105
BOT CHORD 1-8=-59/126, 7-8=-59/100, 6-7=-59/100, 5-6=-59/100
WEBS 3-7=-223/0, 2-8=-374/196, 4-6=-374/195

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-2-13, Interior (1) 3-2-13 to 4-2-13, Exterior(2R) 4-2-13 to 10-2-13, Interior (1) 10-2-13 to 11-2-13, Exterior(2E) 11-2-13 to 14-5-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 24 lb uplift at joint 1, 157 lb uplift at joint 8 and 154 lb uplift at joint 6.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB5	Valley	1	1	I73103603 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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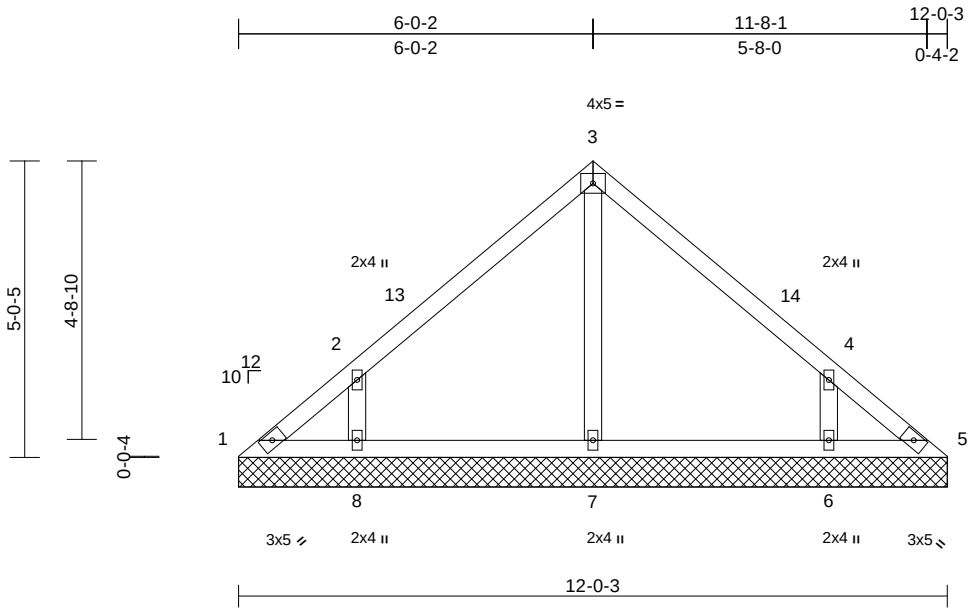

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 50 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-0-3, 5=12-0-3, 6=12-0-3, 7=12-0-3, 8=12-0-3
Max Horiz 1=114 (LC 11)
Max Uplift 1=-34 (LC 10), 5=-6 (LC 11), 6=-136 (LC 15), 8=-139 (LC 14)
Max Grav 1=91 (LC 30), 5=70 (LC 24), 6=434 (LC 21), 7=259 (LC 20), 8=434 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-114/101, 2-3=-218/115, 3-4=-218/115, 4-5=-88/63
BOT CHORD 1-8=-32/75, 7-8=-31/73, 6-7=-31/73, 5-6=-31/73
WEBS 3-7=-172/0, 2-8=-401/220, 4-6=-401/220

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 9-0-8, Exterior(2E) 9-0-8 to 12-0-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 34 lb uplift at joint 1, 6 lb uplift at joint 5, 139 lb uplift at joint 8 and 136 lb uplift at joint 6.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB6	Valley	1	1	I73103604 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:20
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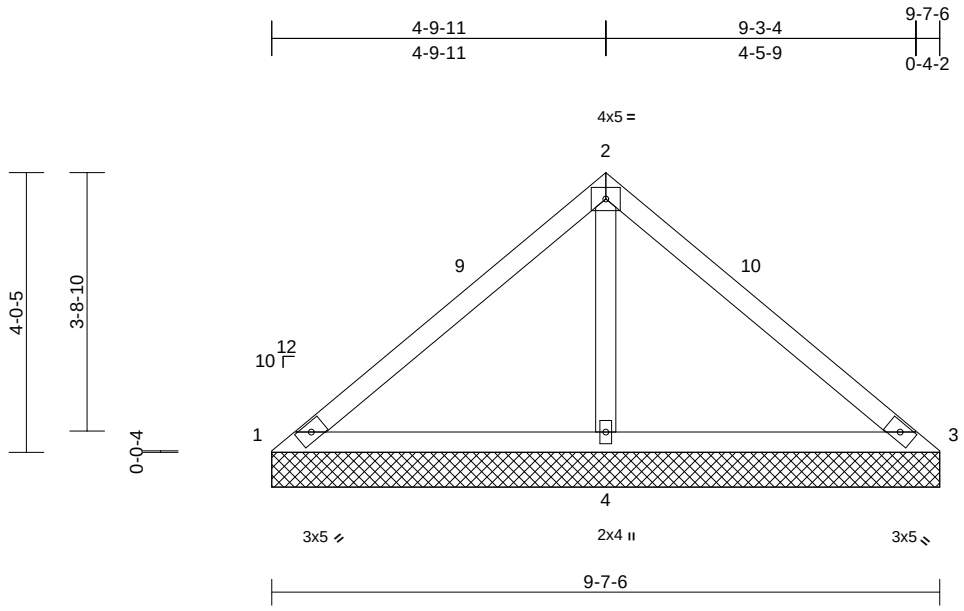


Scale = 1:33.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.45	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.42	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.18	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-7-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-7-6, 3=9-7-6, 4=9-7-6
Max Horiz 1=90 (LC 11)
Max Uplift 1=-49 (LC 21), 3=-49 (LC 20), 4=-108 (LC 14)
Max Grav 1=95 (LC 20), 3=95 (LC 21), 4=771 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-114/372, 2-3=-114/372
BOT CHORD 1-4=-243/172, 3-4=-243/172
WEBS 2-4=-636/271

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 6-7-11, Exterior(2E) 6-7-11 to 9-7-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 49 lb uplift at joint 1, 49 lb uplift at joint 3 and 108 lb uplift at joint 4.

LOAD CASE(S) Standard

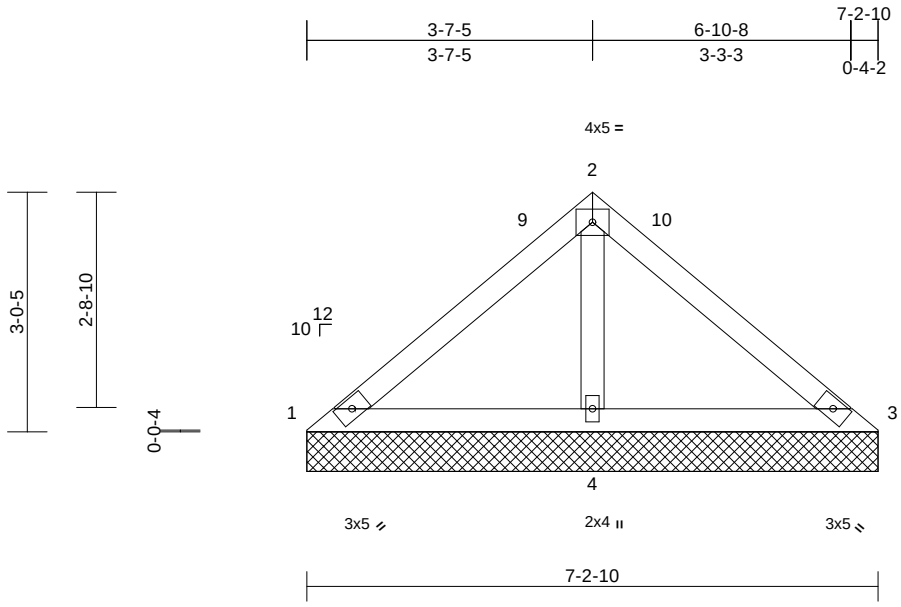
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB7	Valley	1	1	I73103605 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:20 ID:vFTOYoza1WjXT9L6tv8uVZzRQre-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.1

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.26	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.26	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-2-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-2-10, 3=7-2-10, 4=7-2-10
Max Horiz 1=-67 (LC 10)
Max Uplift 1=-17 (LC 21), 3=-17 (LC 20), 4=-73 (LC 14)
Max Grav 1=105 (LC 20), 3=105 (LC 21), 4=530 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-88/228, 2-3=-88/228
BOT CHORD 1-4=-178/151, 3-4=-178/151
WEBS 2-4=-419/199

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-0-5 to 3-0-5, Exterior(2R) 3-0-5 to 4-2-14, Exterior(2E) 4-2-14 to 7-2-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 17 lb uplift at joint 1, 17 lb uplift at joint 3 and 73 lb uplift at joint 4.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLB8	Valley	1	1	I73103606 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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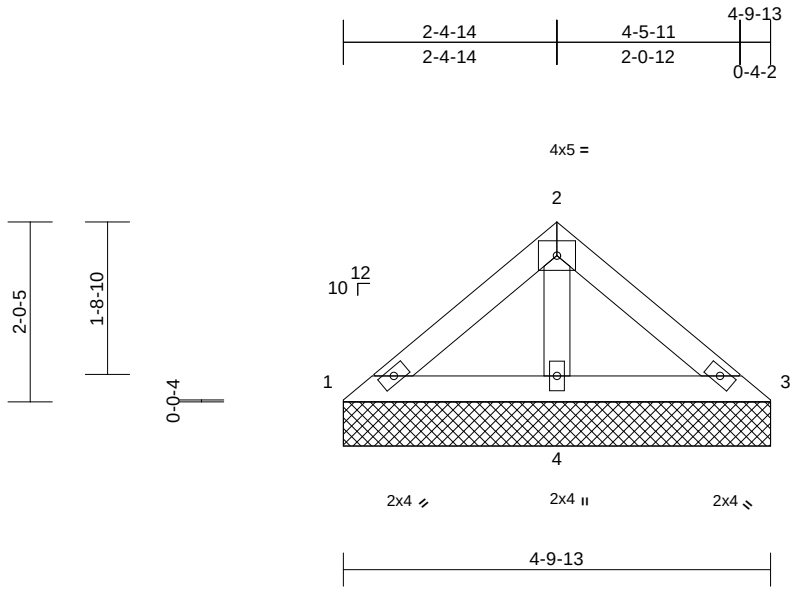

Scale = 1:26

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 17 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 4-9-13 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=4-9-13, 3=4-9-13, 4=4-9-13
Max Horiz 1=-43 (LC 10)
Max Uplift 3=-7 (LC 15), 4=-33 (LC 14)
Max Grav 1=88 (LC 20), 3=88 (LC 21), 4=292 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-80/102, 2-3=-80/102
BOT CHORD 1-4=-82/87, 3-4=-82/87
WEBS 2-4=-207/95

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 3 and 33 lb uplift at joint 4.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD1	Valley	1	1	I73103607 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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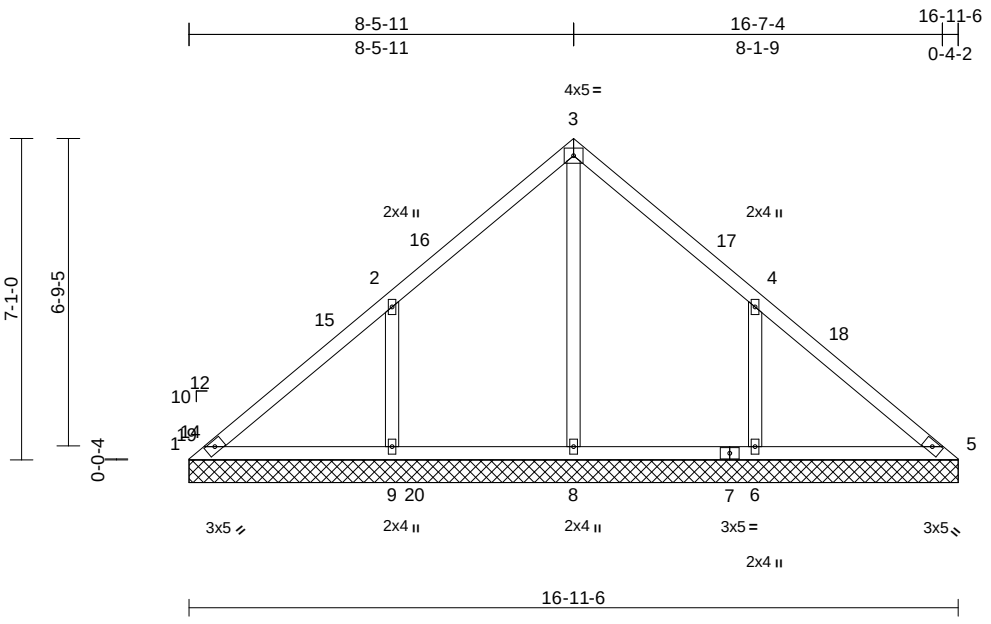

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Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.35	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.18	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.27	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 76 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=16-11-6, 5=16-11-6, 6=16-11-6, 8=16-11-6, 9=16-11-6
Max Horiz 1=-161 (LC 10)
Max Uplift 1=-27 (LC 10), 6=-184 (LC 15), 9=-186 (LC 14)
Max Grav 1=108 (LC 25), 5=107 (LC 21), 6=522 (LC 25), 8=497 (LC 24), 9=524 (LC 24)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-143/253, 2-3=-109/191, 3-4=-108/171, 4-5=-120/217
BOT CHORD 1-9=-133/138, 8-9=-133/138, 6-8=-133/138, 5-6=-133/138
WEBS 3-8=-312/0, 2-9=-396/220, 4-6=-397/219

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Interior (1) 3-4-13 to 5-6-0, Exterior(2R) 5-6-0 to 11-6-0, Interior (1) 11-6-0 to 13-11-11, Exterior(2E) 13-11-11 to 16-11-11 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 27 lb uplift at joint 1, 186 lb uplift at joint 9 and 184 lb uplift at joint 6.

LOAD CASE(S) Standard

April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD2	Valley	1	1	I73103608 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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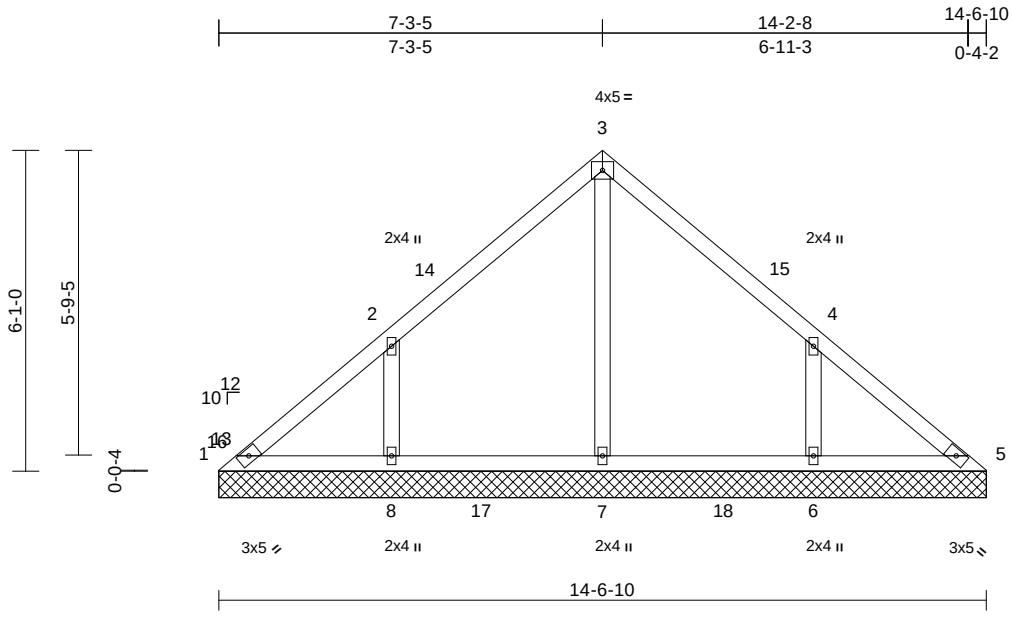

Scale = 1:43.7

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.16	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.15	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 63 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=14-6-10, 5=14-6-10, 6=14-6-10, 7=14-6-10, 8=14-6-10
Max Horiz 1=-138 (LC 10)
Max Uplift 1=-29 (LC 10), 6=-156 (LC 15), 8=-157 (LC 14)
Max Grav 1=110 (LC 30), 5=100 (LC 24), 6=456 (LC 21), 7=406 (LC 24), 8=455 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-142/144, 2-3=-175/120, 3-4=-174/112, 4-5=-123/109
BOT CHORD 1-8=-61/120, 7-8=-61/101, 6-7=-61/101, 5-6=-61/101
WEBS 3-7=-226/0, 2-8=-374/197, 4-6=-375/196

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 3-3-10, Interior (1) 3-3-10 to 4-3-10, Exterior(2R) 4-3-10 to 10-3-10, Interior (1) 10-3-10 to 11-3-10, Exterior(2E) 11-3-10 to 14-6-14 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members, with BCDL = 10.0psf.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 1, 157 lb uplift at joint 8 and 156 lb uplift at joint 6.

LOAD CASE(S) Standard

NORTH CAROLINA PROFESSIONAL SEAL 036322 ENGINEER ERIC A. GILBERT

April 30,2025

ENGINEERING BY TRENCO A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD3	Valley	1	1	I73103609 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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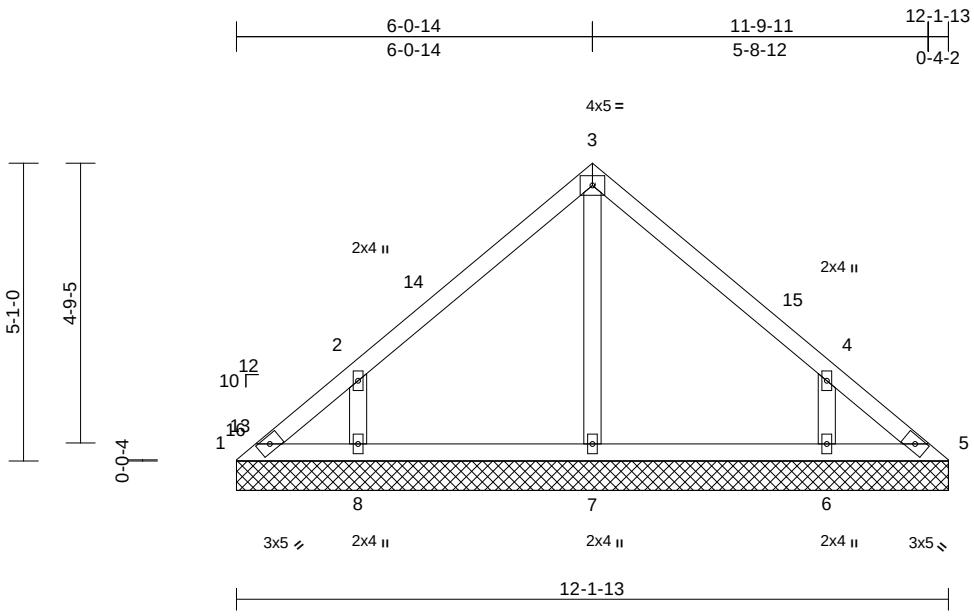


Scale = 1:39.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.31	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.12	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.08	Horiz(TL)	0.00	5	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 50 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=12-1-13, 5=12-1-13, 6=12-1-13, 7=12-1-13, 8=12-1-13
Max Horiz 1=-114 (LC 10)
Max Uplift 1=-37 (LC 10), 5=-5 (LC 11), 6=-136 (LC 15), 8=-138 (LC 14)
Max Grav 1=80 (LC 25), 5=73 (LC 24), 6=434 (LC 21), 7=261 (LC 21), 8=432 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-114/101, 2-3=-217/116, 3-4=-217/116, 4-5=-91/63
BOT CHORD 1-8=-32/75, 7-8=-32/73, 6-7=-32/73, 5-6=-32/73
WEBS 3-7=-173/0, 2-8=-396/212, 4-6=-397/217

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Exterior(2R) 3-4-13 to 9-2-2, Exterior(2E) 9-2-2 to 12-2-2 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 37 lb uplift at joint 1, 5 lb uplift at joint 5, 138 lb uplift at joint 8 and 136 lb uplift at joint 6.

LOAD CASE(S) Standard

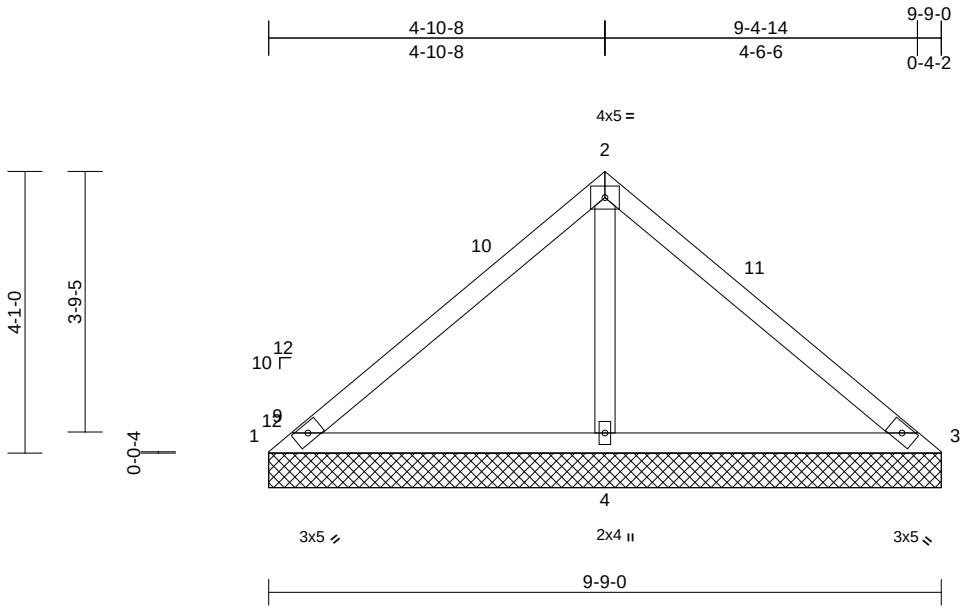
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD4	Valley	1	1	I73103610 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:21 ID:kUxM45s?bF21LX?KCRTFVAzRQqU-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f



Scale = 1:33.4

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.46	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.43	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.19	Horiz(TL)	0.01	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MSH								
BCDL	10.0										Weight: 37 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 9-9-0 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=9-9-0, 3=9-9-0, 4=9-9-0
Max Horiz 1=-91 (LC 10)
Max Uplift 1=-61 (LC 21), 3=-51 (LC 20), 4=-109 (LC 14)
Max Grav 1=74 (LC 20), 3=94 (LC 21), 4=784 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-113/380, 2-3=-115/376
BOT CHORD 1-4=-247/173, 3-4=-247/173
WEBS 2-4=-646/270

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 3-4-13, Exterior(2R) 3-4-13 to 6-9-5, Exterior(2E) 6-9-5 to 9-9-5 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 61 lb uplift at joint 1, 51 lb uplift at joint 3 and 109 lb uplift at joint 4.

LOAD CASE(S) Standard

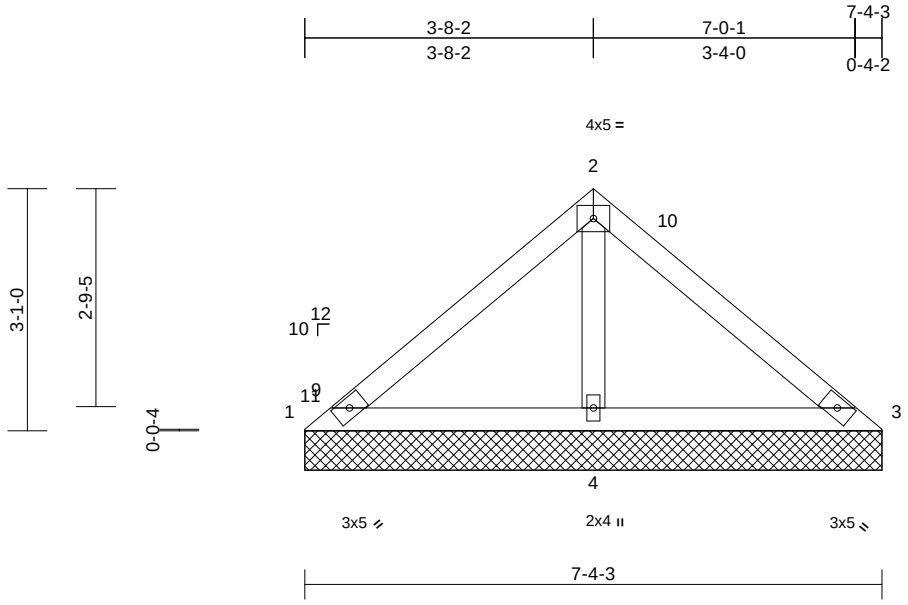
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD5	Valley	1	1	I73103611 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:21 ID:CgVkHRtdMZAuzhaXm9_U1OzRQqT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:29.3

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.27	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.27	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.09	Horiz(TL)	0.00	4	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 27 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 7-4-3 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=7-4-3, 3=7-4-3, 4=7-4-3
Max Horiz 1=-67 (LC 10)
Max Uplift 1=-29 (LC 21), 3=-17 (LC 20), 4=-73 (LC 14)
Max Grav 1=72 (LC 20), 3=103 (LC 21), 4=539 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-87/232, 2-3=-90/231
BOT CHORD 1-4=-182/154, 3-4=-182/154
WEBS 2-4=-428/197

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) 0-4-13 to 3-8-6, Exterior(2R) 3-8-6 to 4-4-8, Exterior(2E) 4-4-8 to 7-4-8 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 29 lb uplift at joint 1, 17 lb uplift at joint 3 and 73 lb uplift at joint 4.

LOAD CASE(S) Standard

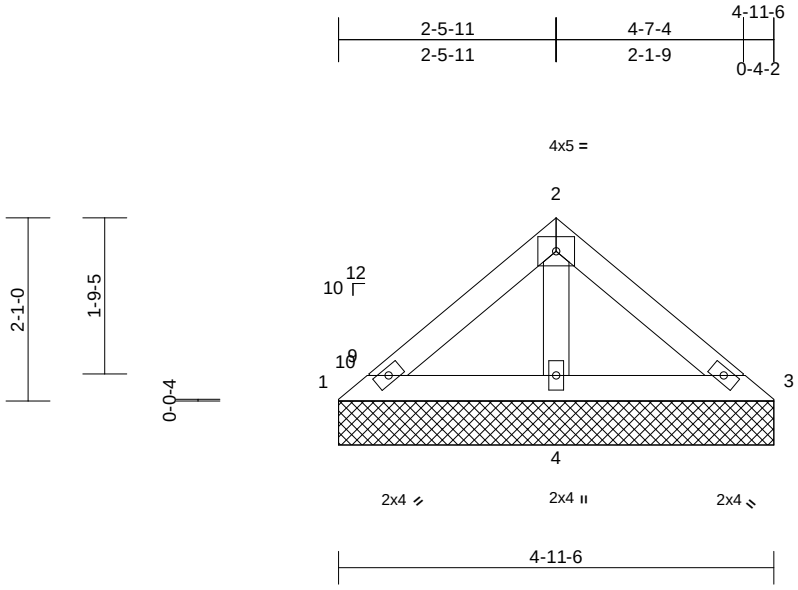
April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD6	Valley	1	1	I73103612 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

Run: 8.73 S Feb 19 2025 Print: 8.730 S Feb 19 2025 MiTek Industries, Inc. Tue Apr 29 10:42:21 ID:CgVkHRtdMZAuzhaXm9_U1OzRQqT-RfC?PsB70Hq3NSgPqnL8w3uITXbGKWrCDoi7J4zJC?f



Scale = 1:26.2

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.09	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.11	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.04	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 18 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2
OTHERS 2x4 SP No.3

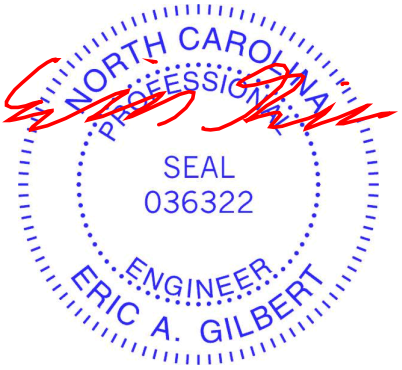
BRACING
TOP CHORD Structural wood sheathing directly applied or 4-11-6 oc purlins.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.

REACTIONS (size) 1=4-11-6, 3=4-11-6, 4=4-11-6
Max Horiz 1=-44 (LC 10)
Max Uplift 3=-7 (LC 15), 4=-32 (LC 14)
Max Grav 1=59 (LC 20), 3=88 (LC 21), 4=297 (LC 20)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-62/104, 2-3=-80/104
BOT CHORD 1-4=-85/89, 3-4=-85/89
WEBS 2-4=-214/98

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 7 lb uplift at joint 3 and 32 lb uplift at joint 4.

LOAD CASE(S) Standard



April 30,2025

ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Job	Truss	Truss Type	Qty	Ply	918 Serenity-Roof-B326 B CP GRH
25040098-01	VLD7	Valley	1	1	I73103613 Job Reference (optional)

Carter Components (Sanford, NC), Sanford, NC - 27332,

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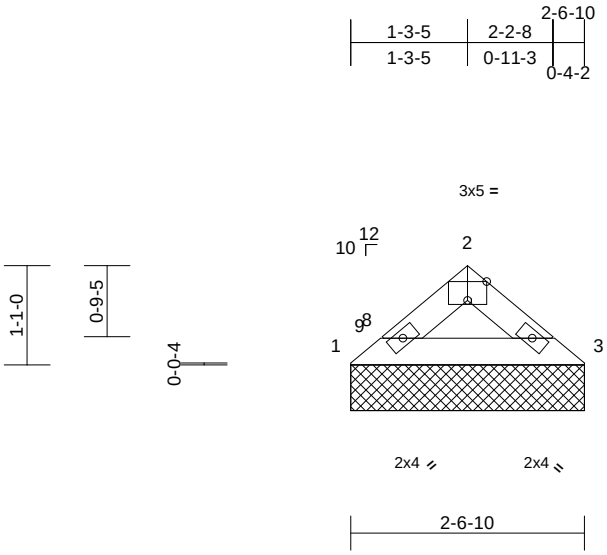


Scale = 1:25.1

Plate Offsets (X, Y): [2:0-2-8,Edge]

Loading	(psf)	Spacing	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL (roof)	20.0	Plate Grip DOL	1.15	TC	0.05	Vert(LL)	n/a	-	n/a	999	MT20	244/190
Snow (Pf)	20.0	Lumber DOL	1.15	BC	0.05	Vert(TL)	n/a	-	n/a	999		
TCDL	10.0	Rep Stress Incr	YES	WB	0.00	Horiz(TL)	0.00	3	n/a	n/a		
BCLL	0.0*	Code	IRC2021/TPI2014	Matrix-MP								
BCDL	10.0										Weight: 7 lb	FT = 20%

LUMBER
TOP CHORD 2x4 SP No.2
BOT CHORD 2x4 SP No.2

BRACING
TOP CHORD Structural wood sheathing directly applied or 2-6-10 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (size) 1=2-6-10, 3=2-6-10
Max Horiz 1=-20 (LC 10)
Max Uplift 1=-1 (LC 15), 3=-8 (LC 15)
Max Grav 1=86 (LC 20), 3=111 (LC 21)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-130/55, 2-3=-142/59
BOT CHORD 1-3=-31/101

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=130mph (3-second gust) Vasd=103mph; TCDL=6.0psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) exterior zone and C-C Exterior(2E) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) TCLL: ASCE 7-16; Pr=20.0 psf (roof LL: Lum DOL=1.15 Plate DOL=1.15); Pf=20.0 psf (Lum DOL=1.15 Plate DOL=1.15); Is=1.0; Rough Cat B; Fully Exp.; Ce=0.9; Cs=1.00; Ct=1.10
5) Unbalanced snow loads have been considered for this design.
6) Gable requires continuous bottom chord bearing.
7) Gable studs spaced at 4-0-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-06-00 tall by 2-00-00 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 1 lb uplift at joint 1 and 8 lb uplift at joint 3.

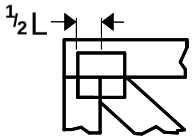
LOAD CASE(S) Standard

April 30,2025

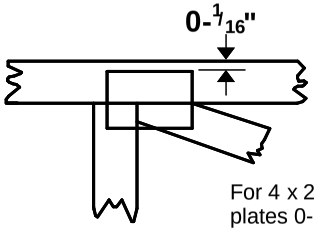
ENGINEERING BY TRENCO
A MiTek Affiliate
818 Soundside Road
Edenton, NC 27932

Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

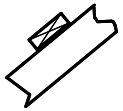
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

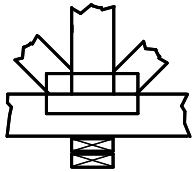
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

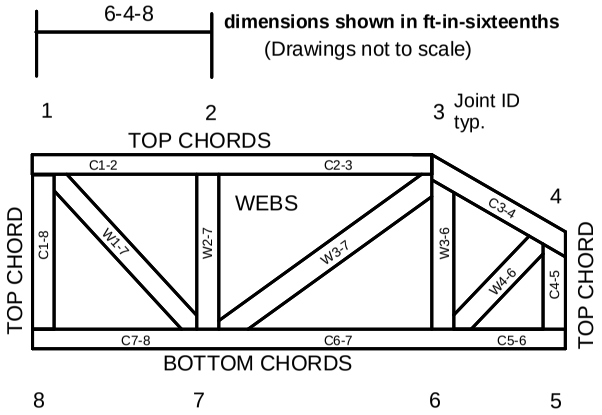


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

ENGINEERING BY TRENCO
A MiTek Affiliate

MiTek Engineering Reference Sheet: MII-7473 rev. 1/2/2023

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.